PB# 84-12

Circle M Piling Lumber Corp (Never Materialized)

9-1-74

84-12

Circle M. Piling Lumber Corp.
Site Plan

never malesalized 8/25/84 ph
filed with Town clerks 8/25/86 ph
office

General Receipt

5680

TOWN OF NEW WINDSOR
555 Union Avenue
New Windsor, N. Y. 12550

March 28 1984

Received of Circle M Piling Lumber Corp. $ 25 00/100

Twenty Five and 00/100 DOLLARS

For Site Plan Application Fee 84-12

DISTRIBUTION:

FUND	CODE	AMOUNT
$25.00 Cash		
Michael Andrews		

By Pauline G. Townsend

Town Clerk

Title

Williamson Law Book Co., Rochester, N. Y. 14609

OFFICE OF THE TOWN ENGINEER

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filed into 10 off

General Receipt

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Williamson Law Book Co., Rochester, N. Y. 14609

OFFICE OF THE TOWN ENGINEER
TOWN OF NEW WINDSOR
555 UNION AVENUE NEW WINDSOR, NEW YORK 12550
PHONE 565-8802

No. ....

Date March 26/84

Rec'd from Mr. Michael Andrews

Amount Twenty-five no/100 ($25.00)

For Planning Bd. Site Plan Approval

Signature Mary B. Benedict
for Shirley Staasden Teufel

A COMPENDIUM OF FACTS CONCERNING THE USES AND ADVANTAGES OF CCA PRESSURE TREATED WOOD

OSMOSE WOOD PRESERVING CO. OF AMERICA, INC.
HOME OFFICE
980 Ellicott Street, Buffalo, N. Y. 14209
716 - 882-5905

SOUTHERN/WESTERN DIVISION
P. O. Drawer O, 1016 Everee Inn Road, Griffin, Ga. 30224
404 - 228-8434

THE FACTS ABOUT PRESSURE-TREATED WOOD

FOREWORD

Until recent years, the use of "pressure-treated wood" has been confined to commercial and industrial users.

Probably the earliest successful uses for wood under adverse conditions (i.e., exposure to naturally damaging elements) were in the ship building industry. From earliest times, man has used a variety of elements to caulk or chink the planks used in building wooden ships . . . the only types of vessels put to practical use by man until the advent of the early "armored" men-of-war built during the Civil War era.

Necessity is the mother of invention hence the mining industry was a forerunner in using wood to shore underground mine shafts that were in direct contact with soil and moisture. To this day, that industry remains as one of the primary markets for "treated" wood.

The advent of the telegraph and telephone proved to be another impetus to perfect methods to make wood impervious to the attacks of nature; many of the earliest experiments were conducted by or in conjunction with the telephone companies.

It has only been in comparatively recent years that the use of "pressure treated" wood for landscaping uses and as structural foundations for homes and other buildings has emerged.

The uses of wood for shipbuilding are naturally linked with other marine purposes; docks, marinas, boardwalks, pilings, etc. Wood has also been long favored as pilings for seawalls, man-made canals, etc. In all of these areas, pressure treated wood has been successfully used and accepted as both practical, durable and economical.

A specialized industry exists for the express purpose of "pressure-treating" wood. In the past 40 years that industry has become most sophisticated, as have the chemicals and other materials employed to treat the wood.

Today, "pressure-treated" wood is found not only in such obvious uses as marine, railroad ties, mine shoring and telephone poles; it has been growing rapidly for landscaping and fencing purposes. Its specification has become standard for highway sign posts, parks and recreational areas and countless other purposes.

In some of these uses, wood's natural beauty, availability and ease of use have been, initially, the paramount factors in its specification. However, in all areas, the ultimate test and reason for use has been its proven practicality as a low cost, durable, weather and nature resistant material.

The most recent and probably most controversial adaptation of this marvelously effective weather-proof material has been in the consumer marketplace, where it has been increasingly accepted by the do-it-yourself advocate for household landscaping and beautification . . . by the architect who desires to combine wood's natural warmth and beauty into permanent structures, both above and below ground . . . and by innovative builders, many of whom have been quick to recognize the advantage and adopt the "All-Weather-Wood-Foundation" or wooden basement, a product evolving from projects first initiated by the United States Department of Agriculture, the NAHB (National Association of Home Builders) Research Council and the National Forest Products Association. It is now estimated that well over 30,000 All Weather Wood Foundations have been built and are successfully providing not only structurally sound foundations, but also adding another physical level of living to the growing American Homebuilding Industry.

The Osmose Wood Preserving Company, a forerunner in the development of modern wood preserving techniques, invites you to consider the desirability of a warm, dry home foundation.

We suggest a "level for living" instead of a basement and present this short summary of facts to help explain the process and dispel some of the inaccurate myths that have grown or been, in some cases deliberately circulated to obscure the genuine advantages of "pressure treated" wood as a practical, durable, economical, environmentally safe product for both consumer and commercial uses in the modern construction and home do-it-yourself market.

FACTS ABOUT THE PRACTICAL USE OF MODERN TREATED WOOD

PART 1 - THE DURABILITY OF TREATED WOOD

FACT: WOOD IS AN ATTRACTIVE PRODUCT

For centuries, wood has been preferred by man because of its warmth, beauty, strength, durability and versatility. Its potential use for shelter, recreation and many industrial purposes is virtually unlimited. Because it's easy to use, it's practical. In these uses, however, practicality presumes longevity and durability.

FACT: WOOD LASTS FOR CENTURIES: NEED NOT ROT

Wood, one of our most abundant and renewable resources, will last for centuries if any one of the four basic decay-sustaining elements is eliminated (moisture, air, warmth, food source).

FACT: OSMOSE K-33 IS AN EFFECTIVE WOOD PRESERVATIVE

The Osmose Wood Preserving Company has produced a remarkably effective wood preservative, Osmose K-33, used in treating structural timber and exterior grade plywood. This product contains chromated copper arsenate (CCA), a chemical used world wide as a wood preservative for the past 40 years.

FACT: QUALITY WOOD CAN BE TREATED TO PREVENT DETERIORATION

Each day, more than one million board feet of quality structural lumber are "pressure-treated" with Osmose K-33 to make it resistant to decay, insects, fungus, water, rain, snow, heat or cold.

This wood is preserved in a vacuum/pressure operation that forces decay-preventing chemicals into the cellular structure ("sap wood" or outer layers). These chemicals then become virtually insoluble within the wood. Wood treated in this manner will retain at least 90% of the original preservative.[1]

FACT: WATER-BORNE (CCA) CHEMICALS ARE THE MOST PRACTICALLY EFFECTIVE AVAILABLE TREATING AGENTS

Unlike many other concepts, the water-borne system, in particular wood pressure-treated with Osmose K-33, is clean, safe and practical. Because the solution is soluble in water there is no residue on the surface to present either a staining or a fire hazard; it is leach-resistant. The unique cellular structure of wood makes water an ideal solvent to enable the chemicals to thoroughly impregnate the wood.

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1. Woolson, E.A., Ph.D., U.S. Dept. of Agriculture, letter to American Wood Preservers Institute, October 7, 1977

FACT: PRESSURE-TREATED WOOD HAS BEEN PROVEN TO BE DURABLE

Test stakes, treated with only one-half of the currently recommended strength of chromated copper arsenate, have been in place for over 39 years with no evidence of decay. Telephone poles pressure treated by the Bell System with chromated copper arsenate have been in use since 1940, "with no reports of failure due to decay, insect attack or termites".[2]

FACT: OSMOSE K-33 PRESSURE-TREATED WOOD IS SUITABLE FOR ALL TYPES OF CLIMATIC CONDITIONS

It has stood up under all conditions in actual use in the United States and around the world. CCA is recognized, approved and in use in many European countries, India, Australia, New Zealand, the Philippines, Canada, Central and South America, and many other areas.

In subtropical Hawaii, the Caribbean area, East Africa and Malaysia, the construction of homes using CCA and other water-borne preservatives has been successful, with some homes in Hawaii in use since 1954.

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2. Lumden, G.Q., 1976, "Evaluation of Wood Preservatives in Poles and Posts at the Gulfport Test Plot - An extension to 38 years of the 1952 Report Covering a Quarter Century of Testing" AWPA Proceedings, Vol. 60, pages 45-60

FACT: THE CCA PRESSURE TREATMENT IS PERMANENT

At least two recognized authorities have testified explicitly to the longevity of properly treated CCA woods. R.D. Arsenault indicates that "Studies containing new data, and literature reviewed, support the undeniable conclusion that poles, lumber and plywood treated with CCA preservatives to currently specified retentions and penetration for ground contact will outlast the useful life of the structure."[3] G.A. Koenigshof (U.S. Forest Service, 1973) states that: "Since there has been no loss of treatment chemicals (after 30 years) we estimate the life of properly treated wood will exceed 100 years . . . and will outlast the usefulness of the structure."[4]

Numerous checks of preservative retentions have been made on a continuing basis. "In December, 1974 . . . a North Carolina test trial was chosen for inspection and five Greensalt poles were sampled . . . above and below ground. All poles were sound and in excellent condition after 32 years in line . . . thereby confirming that the poles would probably last at least 100 years". "Of particular significance is the almost identical ratio of components between the average original

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3. Arsenault, R.D., "CCA Treated Wood Foundations - A Study of Permanence, Effectiveness, Durability and Environmental Considerations", Proceedings, American Wood Preservers Association, 1975, Page 4, Table 5 and Figure 1 & 2

4. Koenigshof, G.A., U.S. Dept. of Agriculture, letter to American Wood Preservers Institute, August, 1973

after-treatment analysis and that 32 years later below ground". . . There are also no differences between above and below-ground retentions, indicating no loss of components".[3]

3. Arsenault, R.D., "CCA Treated Wood Foundations - A Study of Permanence, Effectiveness, Durability and Environmental Considerations", Proceedings, American Wood Preservers Association, 1975, Page 4, Table 5 and Figure 1 & 2

PART 11 - ENVIRONMENTAL CONSIDERATIONS

FACT: OSMOSE K-33 IS AN ENVIRONMENTALLY SAFE PRODUCT

The Osmose K-33 CCA chemical compound, as used in pressure-treated wood, is an inorganic, fixed, pentavalent arsenate. Arsenic compounds differ in toxicity. To quote Dr. Stuart A. Peoples, M.D., one of the world's foremost arsenic toxicologists and the author of over 92 papers on arsenic toxicity and metabolism: "This form of arsenic is found everywhere in nature and is not cumulative in human tissues. In man, arsenic as arsenate is non-toxic, is excreted rapidly through the kidneys."[5]

FACT: OSMOSE K-33 IS NOT HARMFUL TO HUMANS OR HOUSEHOLD PETS

Again quoting Dr. Peoples, "Arsenate or pentavalent arsenic, as found in . . . (Osmose K-33 Pressure-Treated Wood) . . . are not harmful on exposure of the treated wood to animals or humans."[5]

5. Peoples, S.A. (University of California), comments at 1975 Building Officials and Code Administration hearings, Atlanta, Georgia

FACT: ARSENIC IS A COMMON ELEMENT IN OUR NATURAL ENVIRONMENT

Arsenic is a by-product obtained during the smelting of copper ore. Although not universal and rarely found as a free element, it does rank twentieth in abundance in the earth's continental crust. It is present in the air we breathe, the water we drink, our backyard soil and in many foods and condiments we use every day.[6] See Table 1

FACT: ARSENICAL COMPOUNDS HAVE BEEN WIDELY USED FOR CENTURIES

Arsenical compounds have been known since 2500 B.C. and were widely used in medicine from the time of Hippocrates (250 B.C.) until the advent of penicillin. Pharmacology textbooks in the 1930's showed specific therapeutic dosage levels.[7]

FACT: ARSENICAL COMPOUNDS DIFFER GREATLY IN SAFETY AS WELL AS USE

Popular literature (such as Kesserling's drama, "Arsenic and Old Lace" and Flaubert's "Madame Bovary") have contributed greatly to general fear and misinformation about arsenic, which is actually found as a major constituent in no fewer than 245 mineral species.

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6. National Research Council, National Academy of Sciences, Subcommittee on Arsenic (1976). Publication pursuant to EPA Contract No. 68-02-1226

7. Peoples, S.A., M.D., "Review of Arsenical Pesticides" American Chemical Society

Two of the more common commercial compounds used today are arsenic trioxide (trivalent arsenic or arsenite) and arsenic pentoxide (pentavalent arsenic or arsenate). "Trivalent arsenic is the most toxic form, whereas pentavalent arsenic is only slightly toxic".[8] Arsenite is an effective rodent control agent; inorganic arsenate is used as an agricultural pesticide, wood preservative and in certain verterinarian pharmaceuticals.

FACT: MILLIONS OF GALLONS OF CCA WOOD PRESERVATIVE (OSMOSE K-33) HAVE BEEN USED SAFELY OVER THE PAST 40 YEARS

CCA preservatives, including Osmose K-33, have been used for generations in preserving telephone poles, shoring mine shafts, in railroad ties, in stakes for tomatoes and grapes, for all types of fresh and salt water marine use, for exterior decking and boardwalks, for agricultural fencing, in fish hatcheries, water cooling towers and in residential and commercial construction, both in foundations and exposed above-grade exterior walls.

FACT: CCA LEACHING DOES NOT PRESENT AN ENVIRONMENTAL HAZARD

The arsenate in Osmose K-33 is locked into the cellular structure of the wood and is virtually insoluble. Expert testimony indicates that even after many years of exposure

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8. "Review of the Environmental Effects of Arsenic", 1976, Oak Ridge National Laboratory, operated by Union Carbide Corporation for the Energy Research and Development Administration, Abstract, pg. xix.

under extreme marine conditions, less than 10% of the original preservative might leach (be dissolved by water and retreat out of the wood in its original liquid state and strength). Even in the first months after construction, run-off or sump water (which might contain particles of arsenate dust left on the surface of the wood) has been tested and found to be within 0.01 parts per million by EPA standards on Public Water Sources and the amount found in one lump of common table sugar. Much higher concentrations of arsenic are commonly found in drinking water in parts of Oregon, in Lake Chautauqua, New York and many other natural bodies of water.

FACT: CCA PRESSURE-TREATED WOOD IS COMMONLY USED THROUGHOUT THE WORLD IN PUBLIC PARKS AND RECREATION AREAS, INCLUDING PLAYGROUND EQUIPMENT

CCA pressure-treated wood is used throughout such well-known areas as Busch Gardens in Florida; in Williamsburg, Virginia; by the National Park Service, U.S. Wildlife Service and in many county and state park systems for picnic tables, fencing, shelters. The Australia Parks System, after thorough tests found it "an ideal, safe material for playground equipment". CCA treated wood can also be found in many zoos, including those in Toronto, Canada and Buffalo, New York.

FACT: BURNING CCA TREATED WOOD DOES NOT CREATE OR RELEASE ARSINE GAS

Several medical and scientific authorities have conclusively stated that any arsenic carried away in the smoke would be in the form of arsenic trioxide, not arsine gas. The smoke-related danger to occupants of a burning dwelling, or to firemen, is from the carbon monoxide naturally created by such a fire.9 & 10

9. Curzon, G.E. and Eisner, H.S. (1953); "An Assessment of the Hazard Caused by Arsenious Fumes from Impregnated Timber in Underground Fires", Ministry of Fuel & Power-Safety in Mines Research Establishment Report No. 78

10. Dobbs, A.J., BA, Phil, D. and Grant, C.; "Report On The Burning of Wood Treated With Wood Preservatives Containing Copper, Chromium and Arsenic", Building Research Establishment, Princes Risborough Laboratory, Aylesbury, Buckinghamshire, England, CP 63/76, 1976

FACT: THERE ARE NO ENVIRONMENTAL PROBLEMS FOR WORKMEN HANDLING CCA TREATED WOOD

The environmental health and safety of workmen engaged in any areas of contact with CCA treated wood have been carefully monitored. This included those at the treating plant, in warehouses where the lumber is stored and men on the actual job site.[11 & 12]

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11. State of Wisconsin, Department of Health & Social Services, "Reports on Occupational Health Evaluation for Airborne Arsenic Concentrations at a Home Building Plant and Wholesale Lumber Warehouse, March 1977, Requests # 31694 & 31695

12. University of Hawaii at Manoa, Pacific Biomedical Research Center, September 13, 1977

PART III - THE ALL WEATHER WOOD FOUNDATION

FACT: IN MANY AREAS OF THE COUNTRY FOUNDATIONS OF TREATED WOOD ARE A VIABLE FACT IN TODAY'S CONSTRUCTION INDUSTRY

Working off a concept first conceived by the NAHB (National Association of Home Builders) Research Foundation the All Weather Wood Foundation (AWWF) was developed in cooperation with the United States Forest Service, the National Forest Products Association and the American Wood Preservers Association.

FACT: THE AWWF IS ACCEPTED AND APPROVED BY

1. United States Department of Housing and Urban Development Minimum Property Standards

   Section 4900.1 - One & Two Family Dwellings
   Section 4910.1 - Multi-Family Dwellings
   Section 4920.1 - Care Type Housing
   FHA
   VA
   FmHA

2. Southern Building Code Congress International

   Section 1302.7 of the Standard Building Code and Compliance Report 7257

3. International Conference of Building Officials

   Research Approval #2765

4. Building Officials and Code Administrators International

   Section 728.3, Basic Building Code and Research Report #72-6

5. American Insurance Association

Section 909.4 of the National Building Code

6. Farmers Home Administration

Bulletin No. 4267 (424) of April 10, 1972

7. Federal Housing Administration

Notice of December 30, 1971

FACT: THE PROPER USE OF TREATED WOOD AND AWWF INSPECTION BY LOCAL BUILDING OFFICIALS CAN BE EXPEDITIOUSLY ACCOMPLISHED

The size and grade of all lumber to be used is clearly defined in a short table published by the American Plywood Association (Form X495 875) and is included in the AWWF DFI Manual.

In addition, each piece of lumber used is required to bear the appropriate APA grade marking plus the AWPB-FDN symbol that certifies preservative retention. A quick visual inspection of the foundation by any qualified inspector will easily satisfy all inspection and code requirement questions.

Reference materials are readily available in the field; from the Society of American Wood Preservers, Inc., 1401 Wilson Blvd, Arlington, Va. 22209; the American Plywood Association; National Forest Products Association, 1619 Massachusetts Ave., N.W., Washington, D.C. 20036; the Osmose Wood Preserving Company, 980 Ellicott Street, Buffalo, New York 14209 and the Osmose Wood Preserving Company, Southern-Western Division, P.O. Drawer 0, 1016 Everee Inn Road, Griffin, Georgia 30224.

FACT: THERE ARE WELL DEFINED DESIGN CRITERIA FOR THE AWWF SYSTEM

The AWWF DFI (Design, Fabrication, Installation) Manual clearly indicates that The American Standard Building Code shall be used as a guide, unless there is an overriding local code. Additional professional reference is available in the "Civil Engineering Handbook"[13] and the "Structural Engineering Handbook."[14] Additional data on critical load sharing/bearing considerations is available in the National Forest Products Association literature, reviewed and approved by model code agencies and by Federal and State regulators.[15]

FACT: THE AWWF HAS SPECIFIC ENGINEERING ADVANTAGES

In many areas, an AWWF can save several hundred dollars over the cost of a conventional masonry foundation. More importantly, the stress-skin construction principles affords greater resistance to sudden changes in both lateral and the vertical loads; gives the foundation greater flexibility in meeting sudden changes in fluid soil pressure and impact loadings. An AWWF can re-distribute an increased vertical load along the entire length of the wall, rather than merely transferring it to one point which would cause settling and cracking.

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13. "Civil Engineering Handbook". L.C. Urquhart, McGraw-Hill, 5th Edition, 1959.

14. "Structural Engineering Handbook", Gaylord & Gaylord, McGraw-Hill, 1968.

15. National Forest Products Assoc., "All Weather Wood Foundation Design, Fabrication, Installation Manual, 6/76.

FACT: THE ENGINEERING DESIGN OF AN AWWF ITSELF CAN BE MODIFIED TO MEET UNUSUAL SOIL, OR LOADING CONDITIONS

The size and spacing of studs and thickness of plywood can be varied to meet the required load. ALL WEATHER WOOD FOUNDATIONS, using the industry design criteria, will compensate for expected and unexpected pressures and resist cracking and bowing. (AWWF data on fluid soil pressure has been adapted from an earlier publication of the National Concrete Masonry Association, "Concrete Masonry Walls", revised and republished in 1975: "Design and Construction of Plain and Reinforced Concrete Masonry Basement and Foundation Walls".)

FACT: INDEPENDENT EXPERTS HAVE FREELY TESTIFIED TO THE EFFECTIVENESS OF THE AWWF SYSTEM

"It is test data of this type concerning these permanent, leach-resistant-type waterborne preservatives which allow us to recommend these preservative systems for such important structural uses as the ALL WEATHER WOOD FOUNDATION System."

- Lee R. Gjovik, U.S. Forest Products Laboratory, in a letter of October 5, 1972

" . . . because of the excellent test data accumulated over 40 years, the treating industry and its technicians like myself recommend its use for wood foundations with the utmost confidence."

- George Q. Lumsden, Chief Bell Laboratories Wood Testing Section, 1974

FACT: AWWF WILL EFFECTIVELY WITHSTAND HURRICANE FORCE WINDS, EARTHQUAKE AND OTHER ATTACKS OF NATURE

Tests have shown that AWWF will withstand loads of 2½ times UBC (Uniform Building Codes) requirements for lateral pressure and uplift. The same system will withstand 8½ times the UBC load for earthquake forces. It is also clearly illustrated that the wood foundations exceed the (masonry) resistance to sliding.[16 & 17]

16. American Plywood Association, Technical Notes No. A411 and B248 (April, 1976)

17. Degenkolb, H.J. and Associates, Engineers: "Evaluation of the Seismic Performance of Treated Wood Foundations, July 30, 1976

FACT: AWWF FOUNDATIONS ARE WARM AND DRY, RARELY LEAK

Application of simple engineering principles keeps AWWF basements dry. No attempt is made to dam surface water around the perimeter of the foundation. Rather such drainage, usually heaviest after a rain, is guided downward toward the base of the foundation by a 6 mil sheet of polyethylene film. There, the water flows into a French drain or gravel bed. The foundation itself rests on a bed of 4 to 6 inches of gravel or crushed stone as does the concrete slab floor of the basement. This gravel bed absorbs the surface water. Any excess is drained off, either by a sump or by a positive drain to storm sewers where allowed by building codes or to open or lower terrain. Backfill near the footing, also of crushed stone or washed gravel, aids natural drainage. Asphalt paper or strips of plastic are laid loosely over the gravel bed to let water through but prevent silts or clays from infiltrating and plugging the porous gravel. Drain tile is unnecessary.

FACT: THE POLYETHYLENE FILM IN AN AWWF IS NOT INTENDED TO WATERPROOF THE FOUNDATION

The polyethylene film is intended only as a guide for the water. The film is attached to the top of the foundation wall only (at grade level) by a strip of 9-inch exterior grade treated plywood and allowed to hang free, extending down to the stone footing. Therefore, rips

or holes in the film that might develop during construction are not critical. It does not matter which side of the membrane the water flows down so long as it follows its natural course down and away from the foundation.

FACT: POLYETHYLENE FILM, AS USED IN THE AWWF, IS NOT ADVERSELY AFFECTED BY ULTRAVIOLET RAYS

Extensive testing by Union Carbide Laboratories indicates that the kind of poly film used in the AWWF system will not be degraded by ultraviolet light unless exposed for three months or more. It is highly doubtful that an AWWF construction job would be left unfinished and without backfill for such a long time.[17]

FACT: THE AWWF HAS PROVED EFFECTIVE AGAINST FLOODING

In 1969, Hurricane Camille dumped 11 1/2 inches of rain on homeowners in Maryland and Virginia in a 24 hour period. Residents of those states found their wood foundations dry while many concrete basements in the area were flooded.

17. DeMelio, F.A., Union Carbide Company, letter to National Forest Products Association, Huntington Beach, CA, March 14, 1977

FACT: FROM A PRACTICAL STANDPOINT, THE AWWF IS ENERGY EFFICIENT

An 8 inch poured concrete wall has about the same insulation value as a half-inch plywood wall. However, the AWWF system is based on plywood plus 4" or 6" wood studs and the use of R-11* or R-19 insulation between the studs. Therefore, the AWWF automatically comes out ahead, insulation or energy-savings-wise - usually at a saving of several hundred dollars per foundation. Even if the costs are equal, the AWWF saves energy. A conventional stud wall, including footing, studs and plates, could be added inside a poured or block basement, but it would add greatly to the cost of the home. It would actually require 8" concrete blocks, a complete stud wall and a 1/2" gypsum drywall to compare favorably with the AWWF basement from an energy-saving standpoint. The difference in cost would be substantial.[18]

FACT: THE AWWF IS PRACTICAL FROM A MORTGAGE/INSURANCE VIEWPOINT

The AWWF is approved by the HUD Minimum Property Standards Act. More than 30,000 AWWF homes have been financed through the FHA, VA, Farmers Home Administration and

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18. Boileau & Latta, "Calculation of Basement Heat Losses", NRC 10477, 1968; National Research Council of Canada, Division of Building Research (Insulation values for above from NAHB Research Foundation Manual, September, 1971)

*'R' values: a uniform insulation value system adopted by the industry to standardize measurement of thermal resistance. Base insulation value on actual thermal loss/gain rather than on thickness of insulating materials. The higher the 'R' value, the greater the insulation value.

commercial banking institutions. The AWWF has also been approved by the largest insurer of conventional mortgages, the Mortgage Guarantee Insurance Corporation.[19]

The same basic premiums for fire and homeowners' insurance policies apply to homes with AWWF, concrete or masonry block foundations. AWWF homes even qualify for preferential fire insurance rates granted in some states to dwellings with a 'continuous enclosed foundation'.[20]

19. Mortgage Guarantee Insurance Corporation, letter to Lavelle Lumber Company, Fargo, N. Dakota, June 25, 1975

20. Insurance Services, letter to National Forest Products Association, Fire Insurance Department June 24, 1974

ARSENIC IN NATURE

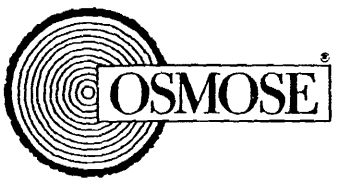
Amounts of Arsenic Found

In

Common Substances

FOOD	ARSENIC CONTENT (Parts Per Million)
Shrimp shells	15.30
Clams	11.60
Mushrooms	2.90
Oysters, fresh	2.90
Salt, table	2.71
Clams, fresh frozen	2.52
Haddock	2.17
Puffed Rice	1.60
Shrimp, fresh frozen	1.50
Beef, stewing	1.30
Tea	0.89
Cornmeal	0,78
Cocoa	0.59
Rhubarb	0.48
Cherry tomatoes	0.37
Lamb chops	0.35
Garlic, fresh	0.24
Gelatin	0.19
Grapes, wild	0.17
Milk, evaporated	0.17
Wheat, whole	0.17
Corn	0.11
Yellow tomatoes	0.10
Sugar, lump	0.10
Pork, loin	0.06
WATER	
U.S. EPA Public Water Sources	0.10
U.S. Public Health Service (Drinking Water Standards)	0.05
AWWF	
Basement Sump Water, Atlanta, Georgia (Construction completed May, 1974)	
June, 1974	0.11
September, 1974	0.08
January, 1975	0.02

FOR MORE INFORMATION ON CCA PRESSURE TREATED WOOD OR ALL WEATHER WOOD FOUNDATIONS CONTACT:



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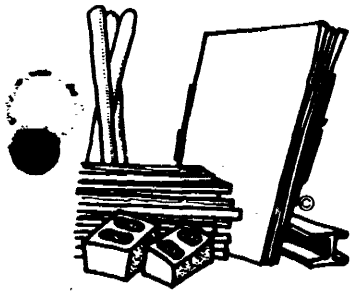


Circle M Piling & Lumber Corp.

1901 RALPH AVENUE
BROOKLYN, NEW YORK 11236
Tel.: (212) 968-7277

March 27, 1984

Mr. Henry Reyno
Chairman of the Planning Board
Town of New Windsor
New York

Dear Sir,

First of all, we should like to thank you and your Board for giving us this opportunity to present our situation to you at such short notice. This urgency was caused by circumstances completely beyond our control.

Our business is the processing of "weather-proofing" and "fire-retarding" lumber for the building industry. Both processes being clean and absolutely safe, from all points of view, as is clearly shown within the attached literature.

The application before you now is for a temporary permit. There is no need for any added construction; everything is already in place to allow for the continuity of our business. In approximately six months, we hope to acquire seven acres on the west side of the tracks for a permanent home, which, of course, will require a further application to your Board.

The temporary plant will require twenty employees, approximately half of whom we will need to recruit from your area. On the permanent site that situation will at least double, and we assure you that local labor will be used.

We should be most grateful for your Board's approval of our application, as it is vital to the continuance of our existing contracts that we have the minimum of delay in relocating.

May we assure both you and your Board that we shall do everything within our power to be an asset to the location in particular, and to the community of New Windsor as a whole.

Very truly yours,

Michael Andrews

Michael Andrews, Vice President
Circle M. Piling & Lumber Corp.

MA:sh

Darrell W. Kelsoe & Associates, Inc.

CONSULTING & CONSTRUCTION
PRESSURE TREATING SYSTEMS & DRY KILNS
EVANSTON ROAD P.O. BOX 625
LUCEDALE, MISSISSIPPI 39452
601/947-4284

March 23, 1984

Mr. Michael Andrews
Circle- M- Piling
One Hoffman Street
Poughkeepsie, N. Y. 12602

Ref: KEL-WOOD Mini Plant

Dear Mr. Andrews:

The "KEL-WOOD" mini plant is a self contained treating unit which will treat lumber with CCA and has been designed for no discharge to the environment.

The plant has bee designed to catch and contain all chemical drippage from the wood products. The entire plant is built by a ASME coded shop in Lufkin, Texas. The treating cylinder and storage tanks are all tested and coded to meet ASME code. The entire unit is portable,

The only requiremnt for a building or shed is that the rails or drip pan out front of cylinder must be covered from the rain.

We hope this meets with your approval. If we can be of further assistance, please do not hesitate to call.

Yours truly,

DARRELL W. KELSOE & ASSOCIATES, INC.

James H. Giles
Executive Vice President

JHG/jh

PROPERTIES OF OSMOSE K-33 TREATED WOOD

Permanence

Osmose K-33 is suspended in water for pressure impregnation deep into the wood member. A chemical reaction then takes place between the wood fibers and the wood preserving chemicals which permanently locks the wood preservative in the treated member. This reaction renders the material leach resistant even under severe conditions of continuous wetting and drying or in direct contact with running water.

Strength

Treatment with Osmose K-33 does not influence to any significant degree the strength properties of any timber.

Electrical Conductivity

Tests show that Osmose K-33 treated wood has a higher electrical resistance than untreated wood (at the same moisture content). This is particularly significant in the field of electric power transmission poles, etc.

Fire Resistance

Treatment with Osmose K-33 does not increase the flammability of timber and there are some indications that combustibility is reduced.

Safety in Use

Although proven in laboratory, field trials and practice over many years to be highly toxic to wood destroying organisms, Osmose K-33 treated wood presents no health hazard to humans, animals or green plants.

Gluing

Osmose K-33 treated lumber is readily glued with quality adhesives. It is recommended that 4 to 8 hours prior to gluing the material be lightly dressed or sanded, and then brushed clean, and that the moisture content be within the glue manufacturer's recommendations.

Decorating

Osmose K-33 needs no decoration, but if desired can be painted, stained, varnished, etc., in the same manner as untreated wood providing care is taken to ensure that the moisture content is within the range recommended by paint manufacturers.

Fixings

Under normal conditions of use, Osmose K-33 treated wood is no more corrosive to metal fasteners than is untreated lumber.

Availability

Osmose K-33 Wood Preservative is available from a broad network of treating plants and lumber distributors throughout the United States.

HOME OFFICE:
980 Ellicott St.
Buffalo, N. Y. 14209
716—882-5905

SOUTHERN OFFICE:
1016 Everee Inn R
Griffin, Ga. 30223
404—228-8434

Incoming Wats:
800—241-0240

OSMOSE

Data Sheet K-1-70

OSMOSE K-33®

MATERIAL

Permanent type wood preservative for the pressure treatment of wood products for all types of exposures and uses.

PURPOSE

To protect wood products against attack and deterioration by rot, decay, all types of termites, powder post beetles, marine borers and all other wood destroying organisms.

STANDARDS & APPROVALS

Federal Specification TT-W-550 and TT-W-571, American Wood Preservers' Association, Federal Housing Administration, Farmers Home Administration, Department of Housing and Urban Development, Veterans Administration, American Association of State Highway Officials, The Naval Engineering Facilities Command, Corps of Engineers, Air Force, General Services Administration, all Model Building Codes, most State Highway Departments and local and city building codes.

USES

Anyplace wood is subjected to deterioration by rot, decay or insect attack. Plates, furring strips, studs, floor joists, sub-flooring, roof trusses and decking; cant strips, fascias, soffits, exterior wood siding, fences, fence posts, sleepers imbedded in or laid on concrete, foundation piling, exterior balconies, porches and steps, pole barns, corrals, farm structures, flumes, dams, guardrails, sign posts, bridges, cribbing, retaining walls, boardwalks, loading docks, wharves, power and telephone poles, docks, marine piling, exposed structural framing, etc.

SPECIFICATION

ALL (INSERT IN HERE THE EXACT MATERIALS TO BE TREATED) SHALL BE PRESSURE TREATED WITH OSMOSE K-33 PER THE AMERICAN WOOD PRESERVERS' ASSOCIATION STANDARD P5, RETENTIONS SHALL BE IN ACCORDANCE WITH THE AWPA STANDARDS C1, C2, C4 and C9. WHEN MATERIAL IS TO BE PAINTED OR OTHERWISE FINISHED, OR WHERE SHRINKAGE IS A PROBLEM, THE MATERIAL SHOULD BE DRIED, AFTER TREATMENT, TO A MAXIMUM MOISTURE CONTENT OF 19%. TWO BRUSH COATS OF OSMOSE SPECIAL K-33 TREATING SOLUTION SHALL BE APPLIED TO ALL FIELD CUTS MADE AFTER TREATMENT ON HARD-TO-TREAT SPECIES.

® Registered Trademark

Properties on Back

OSMOSE 6 WOOD TREATMENT PRESERVATIVE 1970

COSMOSE®

K-33® Pressure Treated Wood

OSMOSE K-33®

Decay and Termite Resistant Wood

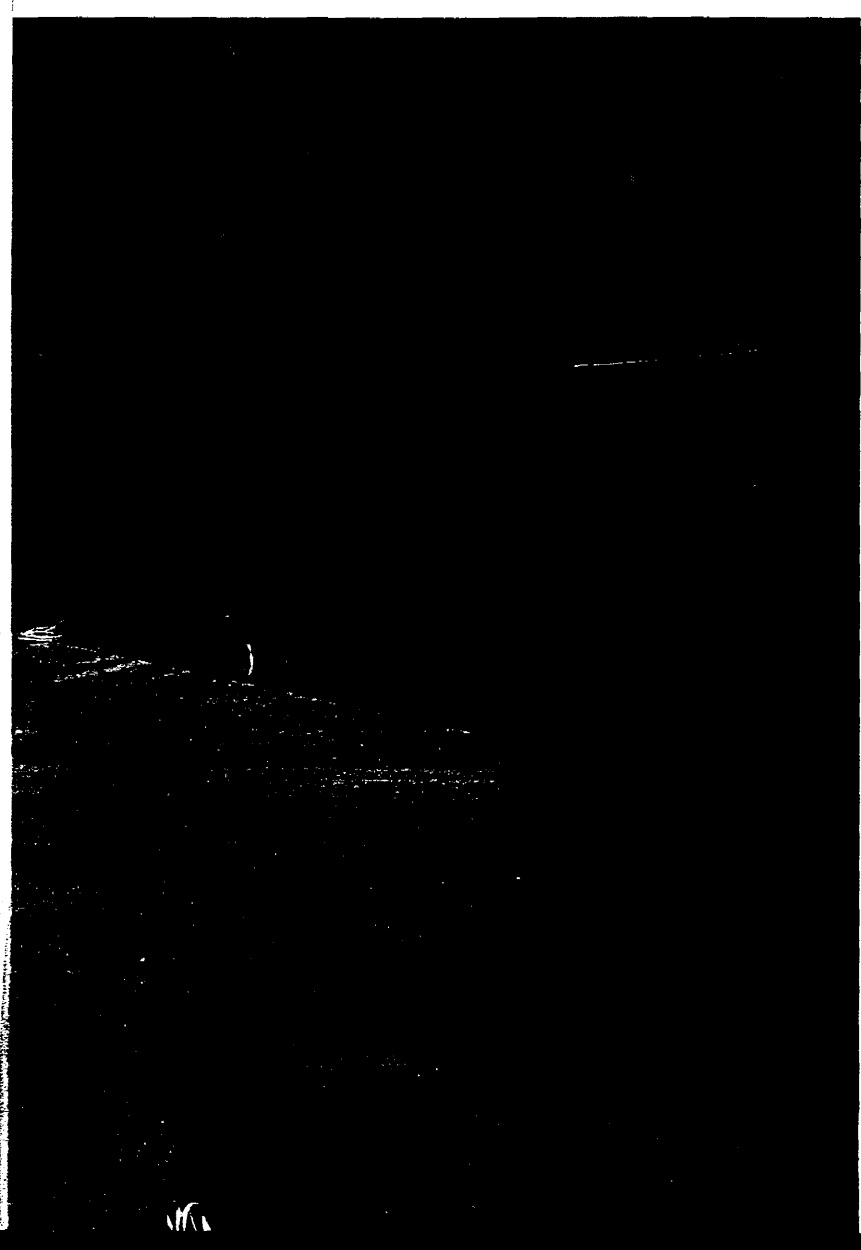
Since the beginning of time wood has been recognized as the ideal building material because of its warmth, beauty, strength, durability and versatility. Wood will last for centuries if one of the four elements needed by wood-destroying organisms is eliminated - moisture, favorable temperature, air, or food source.

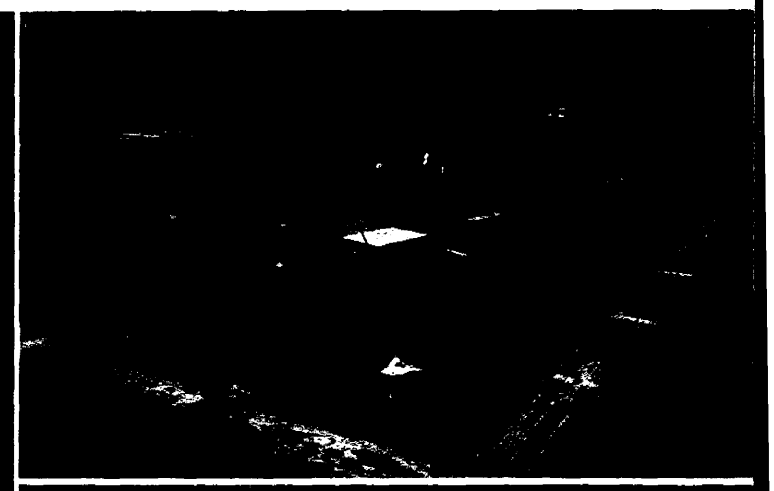
Osmose K-33 preserves wood from decay and insect attack by eliminating the wood fibers as a food source. Osmose K-33 is applied to the wood by a vacuum-pressure operation that forces the preservative deep into the cellular structure of the wood. Since the preservative is chemically fixed in the wood, it is leach-resistant even under severe exposure conditions of continuous wetting and drying.

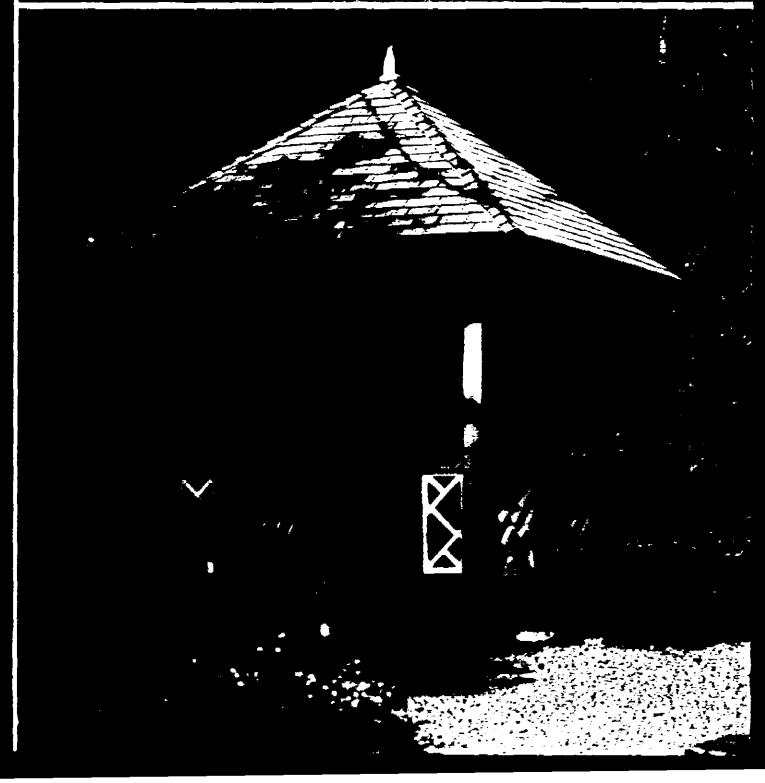
Treatment with Osmose K-33 results in a product that will not contaminate the environment, is pleasing in appearance and is free from objectionable qualities of many other wood preservatives. It does not dissolve out to contaminate skin or clothing, or pollute the environment. The gray-green coloration imparted to the wood blends harmoniously with any surrounding. Osmose K-33 is carried into the wood in a water solution rather than oil, thus conserving a scarce natural resource.

Osmose K-33® Offers Proven Advantages

Permanent, Highly Effective. The chemical reaction that fixes Osmose K-33 in the cell structure of the wood makes Osmose K-33 a permanent preservative. Its leach resistant qualities make Osmose K-33 ideal for in-ground application as well as in contact with fresh or salt water with no loss of preservative qualities. In tests by the U.S. Department of Agriculture, Forest Products Laboratory, Osmose K-33 type preservatives have had no failures after 30 years in contact with the ground. For this reason it has wide acceptance for wood foundations in homes and light commercial buildings.







Maintenance-Free, No Finish Needed. Wood products treated with Osmose K-33 have an attractive gray-green hue which emphasizes the warmth and beauty of natural grained wood. The treated wood is color-stable and needs no finishing. Installed as delivered, it offers low in-place cost and maintenance-free life. However, it may be readily stained or painted, according to manufacturer's recommendations, if desired. Frequent uses include siding, outdoor furniture and boardwalks.

Clean, Odorless, Safe. Osmose K-33 is a clean preservative! Osmose K-33 treated wood is clean to handle, dry to the touch and emits no offensive odors or irritating fumes, which makes it ideal for children's adventure playgrounds, stadium seating, nurseries or wherever wood is used in contact with humans.

Presents No Fire Hazard. Since Osmose K-33 is carried into the wood in a water solution, it is not subject to the increased combustibility connected with oil-borne preservatives. For this reason, it is used for mines, railway tunnels and foundations. Osmose K-33 treated wood is also well suited for above ground installations such as farm buildings and heavy timber construction.

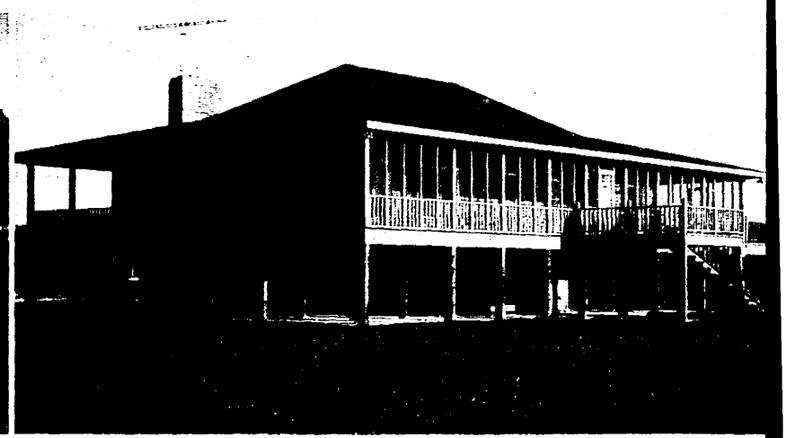
Strength. The Osmose K-33 chemical process does not reduce the strength properties of wood products. Therefore, beams, barn poles and highway guard-rail posts are common uses.

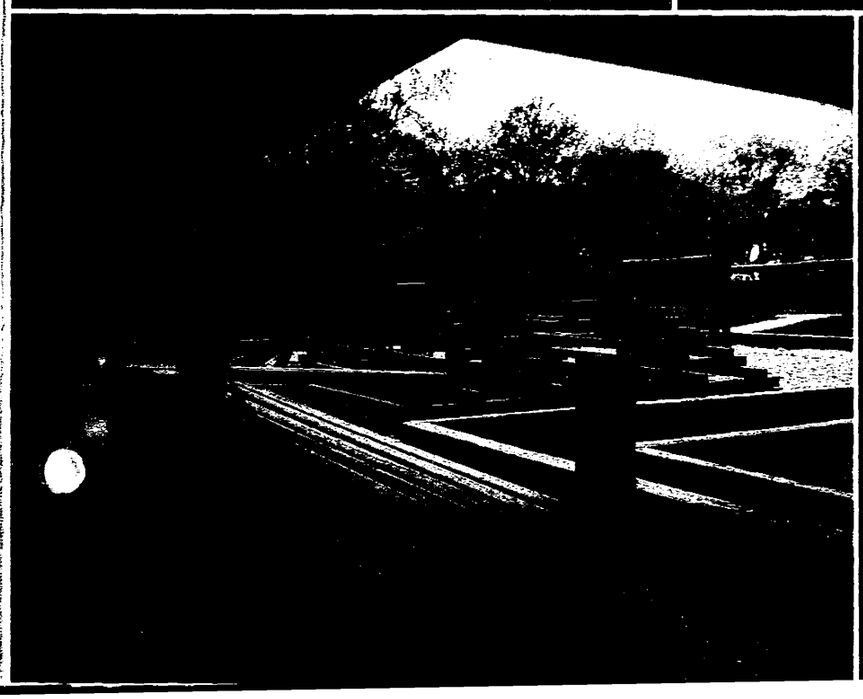
Conductivity. The electrical conductivity of treated wood of any species is not significantly increased above that normally attributed to any given moisture content. This is particularly significant in the field of electric power transmission poles and crossarms.

Uses and Applications

The adaptability of Osmose K-33 pressure treated timbers, lumber and plywood allows you to choose many species of wood for different decorative and structural uses and applications.

Residential - Patios • Balconies • Trim • Siding • Sills • Sleepers • Fences • Decks.
Industrial - Warehouses • Shipping Terminals • Wet Process Industries • Loading Docks • Pallets.
Recreational - Playground Equipment • Stadium Seating • In-ground and Above-ground Swimming Pool Framing • Walls and Decking • Zoos and Amusement Parks • Outdoor Furniture.
Utilities - Crossarms • Telephone, Transmission and Distribution Poles.
Light Construction - Office Buildings • Churches • Stores • Shopping Malls.
Railroads - Ties • Platform and Car Decking • Sign Posts • Poles • Fence Posts • Piling • Bridge Timbers.
Municipalities - Highway Guardrails and Sign Posts • Picnic Tables and Shelters • Beach Houses and Boardwalks.
Agriculture - Barns • Livestock Ramps and Enclosures • Fence Posts • Pole Buildings • Mushroom Boxes • Grape Stakes • Tomato Stakes.
Marinas - Decking • Stringers • Boat Storage Sheds • Cradles • Sea Walls • Jetties • Piers • Piling.
Landscaping - Bulkheads • Retaining Walls • Tables • Benches • Patios • Edging • Steps • Decks.





OSMOSE K-33®Pressure Treated Wood

Since 1934, Osmose has been a leader in the research and development of wood preservatives, fire retardants and wood treating methods.

Both Osmose K-33 preservative and Flame Proof LHC fire retardant are utilized throughout the United States and Canada for the treatment of wood products.

These chemical formulations are applied to wood by an accurately controlled vacuum-pressure operation which forces the chemicals deep into the cellular structure of the wood. Newly installed treating facilities are automated to operate from a remote control center at the push of a button.

The Osmose pressure treating process forces Osmose K-33 and Flame Proof LHC chemicals into the wood fibers changing the characteristics of wood so it is highly resistant to attack from rot, decay and insects and not susceptible to the common destruction caused by fire.

Distribution of the chemical formulations and treating processes are made by over 100 Osmose licensed treating plants from coast to coast. They offer local availability of pressure treated wood with fast, dependable service and technical assistance on proper specifications and applications. Lumber and plywood pressure treated at each Osmose plant adheres to the rigid quality requirements set by the American Wood-Preservers' Association Standards. An experienced staff of Osmose engineers checks each plant operation on a regular schedule to assure that all treating procedures meet these standards.The Osmose Research Division continually checks samples of treated wood, including treating and chemical balance reports from each plant to assure there is no variation from the quality demanded by Osmose customers.

Incising

Incising is required by AWPA standards for all difficult to treat species including Douglas Fir, Hem/Fir, Redwood, Larch, Jack Pine, Lodgepole Pine and White Pine. Incising may be waived if objectionable; however, the material may not meet proper retention and penetration requirements which can result in reduced service life.

Approvals

Fed. Spec. TT-W-550 and TT-W-571; Federal Housing Administration; Farmers Home Administration; Department of Housing and Urban Development; Veterans Administration; American Association of State Highway and Transportation Officials; U.S. Bureau of Public Roads; The Naval Engineering Facilities Command; Corps of Engineers; Air Force; General Services Administration; American Wood Preservers Association; American Railway Engineering Association; All Model Building Codes; Many state highway departments, local and city building codes.

Specifications

All timbers, lumber and plywood herein specified for treatment shall be pressure treated with Osmose K-33 which meets AWPA Standard P-5 and Federal Specification TT-W-550. Osmose K-33 shall be applied in a closed cylinder by vacuum-pressure process in accordance with the approved standards and recommended treating practices as listed in AWPA Standards C-2 and C-9 or the appropriate AWPA standard covering the commodity treated and as listed in Federal Specification TT-W-571. Treated wood products may be specified to conform to the American Wood Preservers Bureau Standards LP-2 (Above Ground Use), LP-22 (Ground Contact) and FDN (Foundations).

The retention of Osmose K-33 shall be 0.25 lbs. per cubic foot of wood (oxide basis) for moderate service (weather exposure) and 0.40 lbs. per cubic foot of wood (oxide basis) for severe conditions (in contact with ground or fresh water). The specified retention for treated wood subject to severe marine borer attack shall be 2.5 lbs. per cubic foot of wood (oxide basis).

Where it is found necessary to frame Osmose K-33 pressure treated lumber on the job site, a special Osmose preservative shall be liberally brushed onto all cut surfaces, bolt holes and machined areas.

In most uses lumber 2" nominal and less shall be dried to a 15-19% moisture content. Where shrinkage is a serious problem as in roof decking, flooring or sub-flooring, all lumber shall be dried to a 15-19% moisture content. In accordance with AWPA Standard C-9 plywood shall be dried after treatment to a moisture content of 15% or less except that drying may be waived by the purchaser.

OSMOSE WOOD PRESERVING DIVISION

980 Ellicott Street
BUFFALO, NEW YORK 14209
(716) 882-5905

P.O. Drawer O
GRIFFIN, GEORGIA 30224
(404) 228-8434

WB190

PROPERTIES OF OMOSE K-33 TREATED WOOD

SPECIFICATION

All lumber, timber and piles herein specified for treatment shall be pressure treated with OSMOSE K-33 preservative which meets or exceeds American Wood Preservers Association Standard P5. OSMOSE K-33 shall be applied in a closed cylinder by vacuum pressure process, full-cell method, in strict accordance with the recommended practices of the AWPA Standards C2, C14 and C18 or the appropriate AWPA Standard covering the commodity treated. When material is to be painted or otherwise finished, or where shrinkage is a problem the material should be dried, after treatment, to a maximum moisture content of 19%. Two brush coats of OSMOSE SPECIAL K-33 treating solution shall be applied to all field cuts made after treatment on hard-to-treat species.

VERSATILITY

The versatility of OSMOSE K-33 pressure treated wood to meet marine construction requirements is unlimited. It is recommended for any end use where wood is exposed to decay and wood-boring organisms. OSMOSE K-33 preservative is free from objectionable qualities of many wood preservatives which makes OSMOSE pressure treated wood especially desirable for marine wood products.

STANDARDS & APPROVALS

Federal Specifications TT-W-550 and TT-W-571
American Wood Preservers Assoc.
Federal Housing Administration
Department of Housing and Urban Development
Veterans Administration
American Association of State Highway Officials
The Naval Engineering Facilities Command
Corps of Engineers
Air Force
General Services Administration
All Model Building Codes
State Highway Departments
Local and City Building Codes

PERMANENCE

OSMOSE K-33 is dissolved in water for pressure impregnation deep into the wood. A chemical reaction then takes place between the wood fibers and the wood preserving chemicals which permanently locks the wood preservative in the treated wood. This reaction renders the material leach resistant even under severe conditions of continuous wetting and drying or in direct contact with fresh or salt water.

SAFETY IN USE

Although many years of field trials, laboratory tests and practice have proven OSMOSE K-33 to be highly toxic to wood destroying organisms, K-33 treated wood presents no health problems to humans and animals, or hazards to green plants.

DECORATIVE

OSMOSE K-33 has a permanent light grey-green coloration. If desired, it can be painted, stained, or varnished in the same manner as untreated wood provided care is taken to insure that the moisture content is within the range recommended by paint manufacturers.

CLEAN

Because the chemicals are locked into the wood, they will not be tracked from dock to boat, nor will they stain clothing and other items that come in contact with the K-33 treated wood.

FIXINGS

No corrosion problems exist for the use of metal fittings or fasteners under normal use conditions with OSMOSE K-33 treated wood over that caused by untreated wood. Galvanized metal fasteners are recommended for use under moist exposure conditions. At high humidities there is some evidence that copper-containing preservatives such as OSMOSE K-33 do result in some corrosion in contact with aluminum fasteners; thus, under exterior or wet conditions, direct contact with aluminum should be avoided.

AVAILABILITY

OSMOSE K-33 Wood Preservative is available from a broad network of treating plants and lumber distributors throughout the United States.

HOME OFFICE:
980 Ellicott St.
Buffalo, N.Y. 14209
716—882-5905

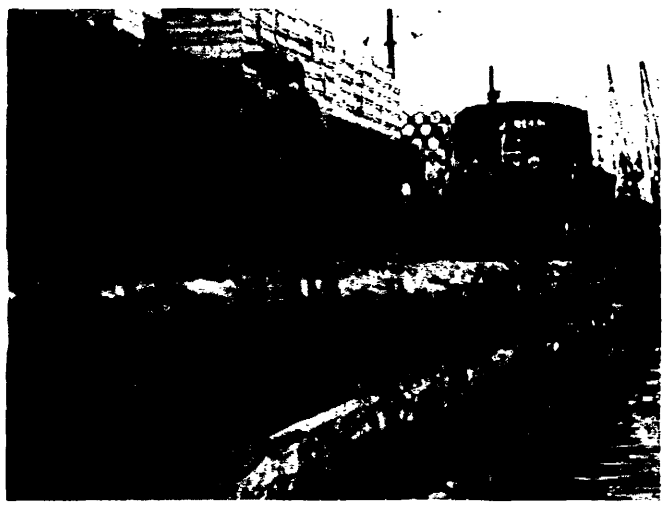
SOUTHERN OFFICE:
1016 Everee Inn Rd.
Griffin, Ga. 30223
404—228-8434

Data Sheet K-5-74

OSMOSE K-33®

PRESSURE TREATED WOOD FOR MARINE CONSTRUCTION

MATERIAL OSMOSE K-33 pressure treated lumber, timbers and piles are produced for marine wood products for use in both fresh and salt water and are permanently durable against destruction by marine borers. OSMOSE K-33, which is used for the pressure treatment of marine wood products, is a superior water-borne wood preservative for all exposures and uses. It is a non-leachable, permanent preservative which retains its toxicity to decay, insects and marine borers for the service life of the treated wood structure.



USES:

- FLOATING DOCKS
- PILINGS
- BULKHEADS
- SEA WALLS
- PERMANENT DOCKS
- BUMPERS
- BOARDWALKS
- RAILINGS
- STORAGE BINS
- RUB BOARDS
- RAMPS, STEPS AND CLEATS

ADVANTAGES:

- Maintenance free (Retains pleasing natural wood appearance)
- Longlasting, durable service life
- Clean and odor-free
- Safe for humans, plants, animals
- Easy surface finishing (may be painted, stained, glued)
- Easily cut and worked
- Non-corrosive to metal fasteners
- No fire hazard

OSMOSE K-33 wood preservative is used throughout the world for protection of wood products from attack by insects and decay organisms. The chemicals are pressure impregnated deep into the structure of the wood and are permanently attached to the wood fibers to insure long lasting service.

Properties on back

ADVANTAGES

Permanence: OSMOSE K-33 is dissolved in water to form the treating solution for pressure impregnation deep into the wood. The preservative chemicals which make up the K-33 preservative formulation cause a chemical reaction to occur within the cellular structure of wood, which results in the formation of an insoluble preservative compound as the wood dries after treatment. This reaction results in a non-leachable wood preservative even though the treated material may be exposed to severe exposure conditions of alternate wetting and drying or to direct contact with flowing water.

Ease of Installation: Framework, walls and decking manufactured from OSMOSE K-33 pressure treated lumber and plywood are set in place in a fraction of normal pool construction time. Construction costs are also considerably lower than for other types of pool construction.

Durability: Since OSMOSE K-33 preservative is an effective barrier against rot and decay and wood-boring insects, pressure treated wood will retain its structural strength under exposure to varying weather and climatic conditions.

Versatility: Wood is easily worked; thus, it may be shop-built or fabricated on the job site. Plywood is an ideal material for swimming pool wall sections because it may be bent or shaped to meet variations in swimming pool designs.

Maintenance: OSMOSE K-33 pressure treated lumber and plywood will retain a naturally pleasing appearance without painting, thus eliminating maintenance costs. Seasonal ground surging will not affect plywood-constructed walls because plywood will bend and give without cracking.

Safety in Use: OSMOSE K-33 pressure treated lumber and plywood exhibits a pleasing light green color, is clean and odor-free. Although many years of field trials, laboratory tests and practice have proven OSMOSE K-33 to be highly toxic to wood destroying organisms, K-33 treated wood presents no health problems to humans and animals, or hazards to green plants.

GENERAL STEPS IN POOL INSTALLATION

1. Pool size and shape are staked out on the ground.
2. Excavation to required dimensions is accomplished and plumbing is installed.
3. Wall sections of OSMOSE K-33 pressure treated wood are set in place.
4. A smooth sand/cement bottom is poured and leveled.
5. A customized vinyl liner (or other material) is installed in place.
6. Pool is partially filled with water and backfilling is accomplished simultaneously.
7. Coping is installed and liner permanently fastened.
8. Pool is completely filled.
9. Decking or approach is installed.

AVAILABILITY

OSMOSE K-33 pressure treated wood products are available from a broad network of treating plants and lumber distributors throughout the United States.

HOME OFFICE:
980 Ellicott St.
Buffalo, N.Y. 14209
716—882-5905

SOUTHERN OFFICE:
1016 Everee Inn Rd.
Griffin, Ga. 30223
404—228-8434

Data Sheet K-6-74

OSMOSE K-33®

PRESSURE TREATED WOOD FOR SWIMMING POOLS

MATERIAL OSMOSE K-33 pressure treated lumber and plywood is produced for permanent in-ground and above-ground structural framework, walls and decking of swimming pools. OSMOSE K-33 is a water-borne preservative for the pressure treatment of wood products which protects wood from attack by all wood-destroying organisms.

PURPOSE OSMOSE K-33 pressure treated materials protect the investment of the pool owner by permanently insuring the durability of wood products used in swimming pool construction. Lumber and plywood used as framework, walls and decking either above or below ground level which has been properly seasoned and treated will not decay; will not be attacked by termites or other wood-boring insects; and will not crack during extreme temperature changes.

STANDARDS AND APPROVALS

- Federal Specifications TT-W-550 and TT-W-571
- American Wood Preservers Association
- Federal Housing Administration
- Farmers Home Administration
- Department of Housing and Urban Development
- Veterans Administration
- American Association of State Highway Officials
- The Naval Engineering Facilities Command
- Corps of Engineers
- Air Force
- General Services Administration
- All Model Building Codes
- State Highway Departments
- Local and City Building Codes

USES OSMOSE K-33 pressure treated wood is recommended for all structural members, supporting walls (either above or below ground), and decking.

SPECIFICATION

All lumber or plywood (exterior grade) herein specified for treatment shall be pressure treated with OSMOSE K-33 preservative which meets or exceeds American Wood Preservers Association Standard P5. OSMOSE K-33 shall be applied in a closed cylinder by vacuum pressure process, full cell method, in strict accordance with the recommended practices of the AWPA Standards C2 and C9 or the appropriate AWPA Standard covering the commodity treated. When material is to be painted or otherwise finished, or where shrinkage is a problem, the material should be dried after treatment to a maximum moisture content of 19%. Two brush coats of OSMOSE Special K-33 treating solution shall be applied to all field cuts made after treatment on hard-to-treat species.

OSMOSE 6 WOOD TREATMENT PRESERVATIVE 1974

OSMOSE K-33

ODOR

OSMOSE K-33 imparts no odor to the wood and releases no fumes; therefore, it may be used in any structure or application without fear of objectionable odor. Creosote has a strong persistent odor. This is especially objectionable when the treated material is used in enclosed structures or in areas where humans may come in close contact.

COLOR

OSMOSE K-33 lends a silvery-green color to the wood which is often selcted by architects as a maintenance-free surface. Creosote treated wood may vary from brown to black, depending on the composition of the treating oils.

PAINTABILITY

OSMOSE K-33 is as easily painted as untreated wood, while creosote treated products can never be painted successfully.

FIRE HAZARD

Creosote is a combustible oil that substantially increases the fire hazard of the treated timber. OSMOSE K-33 chemicals are non-combustible and are carried into the wood in a water solution.

SPECIAL USES

OSMOSE K-33 treated products are suited to all uses where wood needs protection from decay and insect attack; however, they have superior advantages for certain applications where contact with plants, humans and other animals is anticipated, such as:

STADIUM SEATING
BOARDWALKS
MARINAS
GARDEN FURNITURE
SEAWALLS AND JETTIES
LANDSCAPE TIMBERS
BOAT DOCKS AND PIERS
GREENHOUSES AND GROWING TABLES
DECKING
EXTERIOR RAILINGS
FENCING (DECORATIVE OR PRACTICAL)
SWIMMING POOLS

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716—882-5905

SOUTHERN OFFICE:
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Griffin, Ga. 30223
404—228-8434

Data Sheet K-8-74

OSMOSE K-33®

COMPARISON WITH CREOSOTE

PROTECTION AGAINST DECAY AND INSECT ATTACKS

Years of field use and testing throughout the world have proven beyond doubt that CCA (OSMOSE K-33) type preservatives are equal, if not superior to creosote in all applications. U.S. Forest Products Laboratory tests of CCA preservative show no destruction of test stakes after 21 years of exposure. When impregnated into wood fibers, OSMOSE K-33 gives permanent protection against insect and marine borer attack, and prevents the growth of wood destroying fungi.

RESISTANCE TO LEACHING IN USE

The chemical composition of OSMOSE K-33 reacts with the wood fibers and extractives in the wood, fixing the preservatives permanently in the treated material. Unlike creosote, these chemicals do not change their location in the wood; therefore, they do not leach out when exposed to moisture. OSMOSE K-33 is recognized by the American Wood Preservers' Association Standards for all marine applications where only creosote has traditionally been accepted.

CLEANLINESS

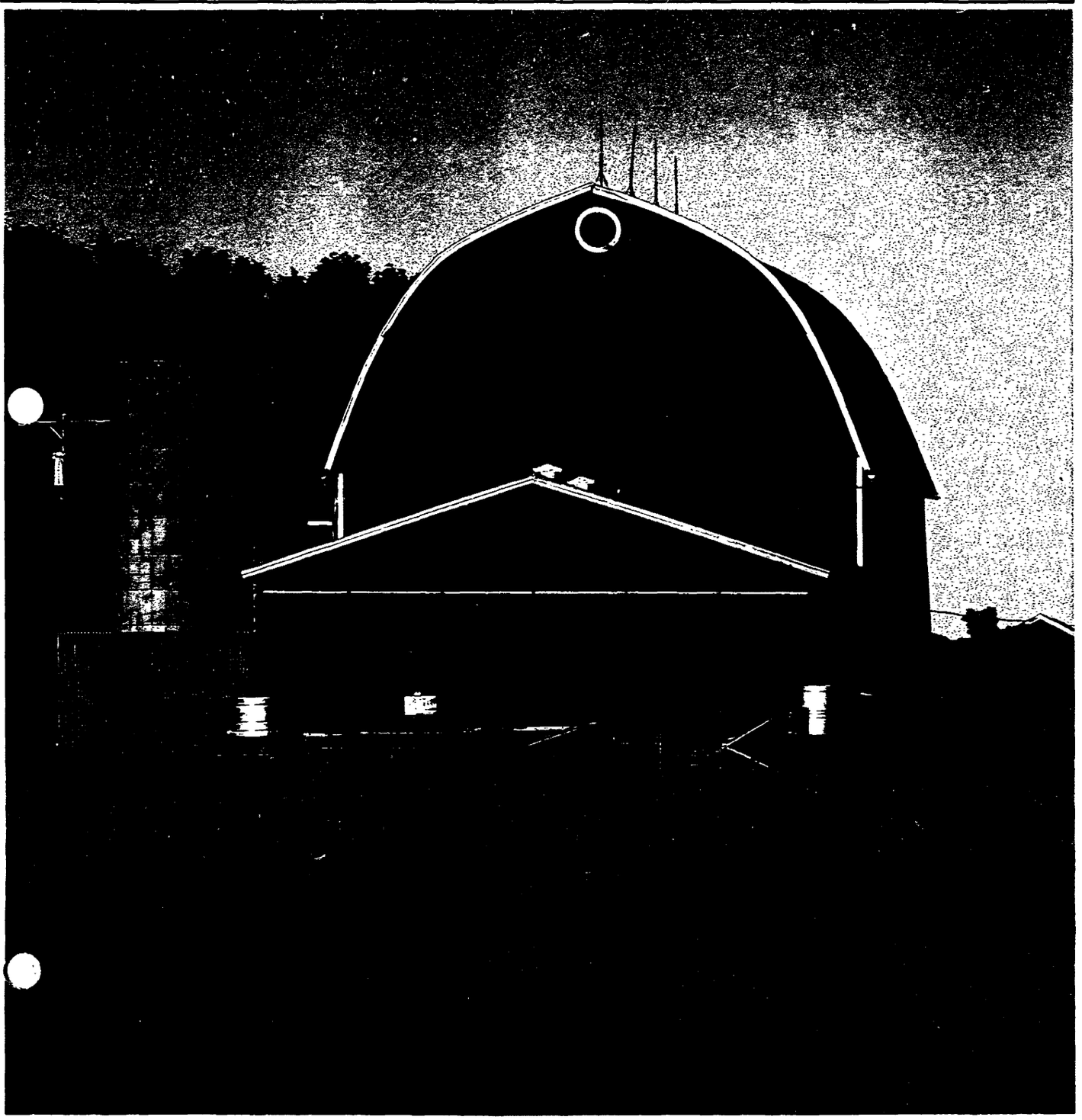
OSMOSE K-33 is carried into the wood by water which is then removed, leaving a clean product that is easily handled. Creosote is a black heavy oil which leaves a residue on the surface of the treated material that can soil anything coming in contact with it.

SAFETY IN HANDLING

Creosote treated products may be harmful to plants and animals that come in contact with the oily residue on the surface. Since K-33 has no residue, this problem does not arise. There is little contact with the chemicals after OSMOSE K-33 is dried, therefore reducing the likelihood of handling problems. This clean surface also eliminates the need for premium labor rates normally charged for handling creosote treated products.

OSMOSE

Keeping Pace With America's Changing Agriculture



Changes in agricultural practices have brought about significant changes in farm construction over the years. Livestock now are commonly raised in confined housing facilities. High warehouse expenses and confined housing practices have increased the need for on farm crop and feed storage facilities. Sophisticated machinery and equipment has given rise to the need for storage and maintenance centers to protect the farmer's investment.

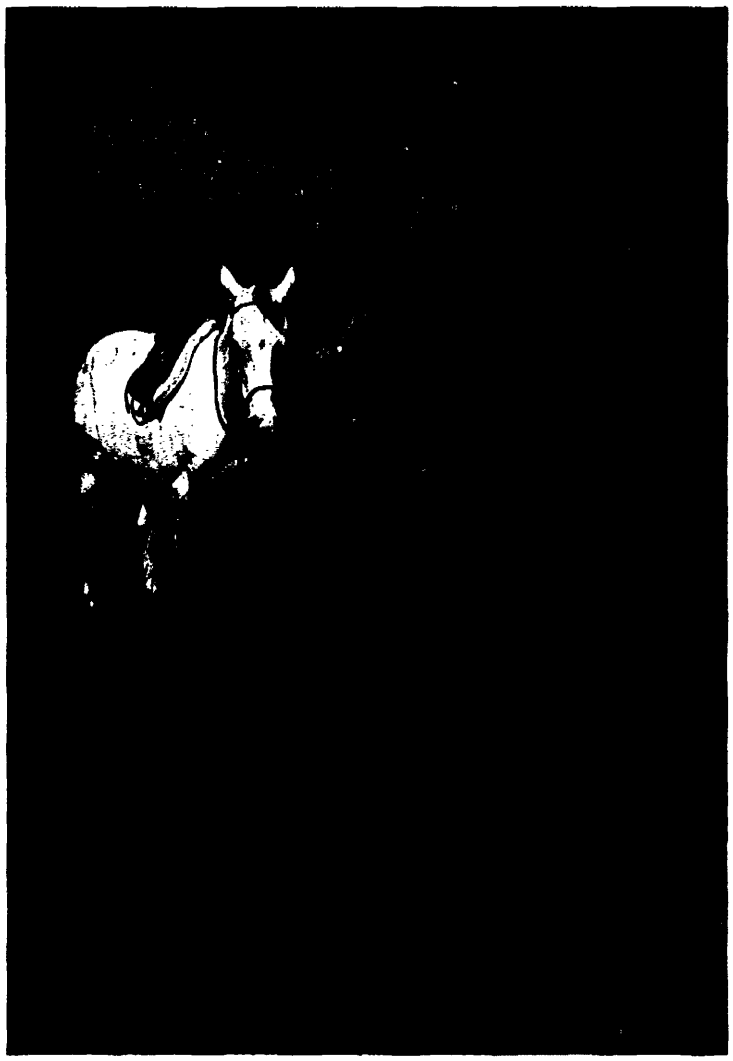
No building material has been able to adapt to the changes in farm practices more easily than wood. And no wood performs better in the farm environment than Osmose brand pressure treated wood. Before Osmose brand pressure treated wood, there was something rotten down on the farm. Untreated fence posts had to be replaced within two to three years. Wagon beds and sideboards, splash boards in barns, buildings and plant stakes all quickly succumbed to the ravages of termites, rot and decay.

Osmose brand pressure treated wood puts a stop to biological wood destruction, provides years of trouble-free service. The Osmose K-33 preservative is forced deep into the wood fibers under pressure, where it forms a permanent bond with the wood fibers. The preservative leaves no surface residue or disagreeable odor, and will not leach out into surrounding soil or livestock feeds.

Tests conducted by the U.S. Department of Agriculture show that stakes treated with Osmose K-33 preservative have resisted termites and decay for over 40 years. The U.S.D.A. predicts a service life for Osmose K-33 treated materials of five to ten times greater than for untreated lumber. Furthermore, U.S.D.A. recommends only lumber teated with Osmose K-33 type preservative for use where the lumber will come in direct or close contact with farm crops or livestock.

RETENTION GUIDELINES Retention required for adequate service life.	.25 pcf	.40 pcf	.60 pcf
APPLICATION	Above Ground Use	Ground/Fresh Water Contact	Ground/Fresh Water Contact, Structural
USE	Fence Boards, Wagon Beds, Decking, Plates and Sills	Fence Posts, Splash Boards, Plant Stakes, Retaining Walls	Building Poles, Bridge Timbers, Manure Pits, Bunker Silos

*Untreated wood typically lasts 2 to 5 years. Quantities based on treating dry pine.



WOOD . . . The Ideal Farm Building Material

Osmose brand pressure treated wood has long been recognized as the ideal farm building material, and is preferred over other building materials for many reasons. Osmose brand pressure treated wood takes and holds paint better than untreated lumber, as the preservative acts like a primer. Since the wood is not subject to rot and decay, paint blistering and peeling are greatly reduced.

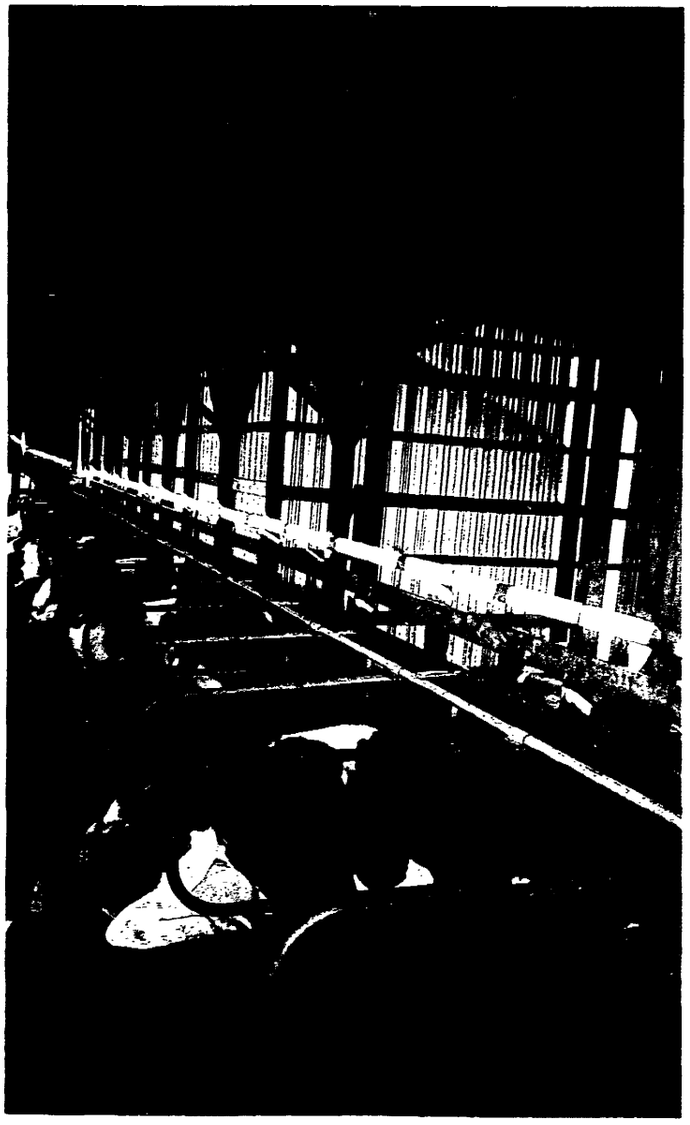
Osmose brand pressure treated farm structrues are preferred for many other reasons also. Since wood is a good insulator, it does not promote water condensation on interior surfaces, an important factor when planning confined livestock housing facilities. Indeed, the insulation value provided by one inch of wood is greater than that provided by an eight-inch concrete block. Wood frame structures are easy to insulate, and are not subject to structural failures due to setting. Minor repairs and maintenance are easily preformed by the owner, reducing the cost of up-keep.

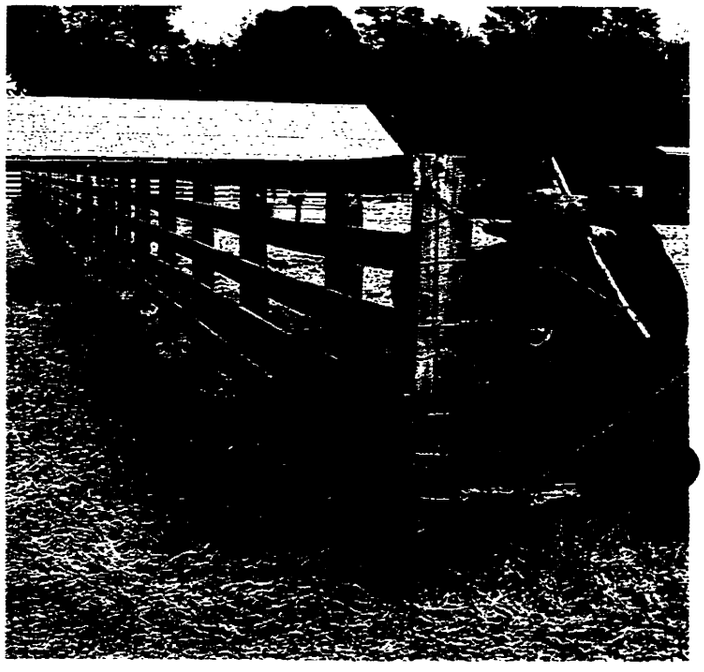
RECOMMENDED FOR CROPS

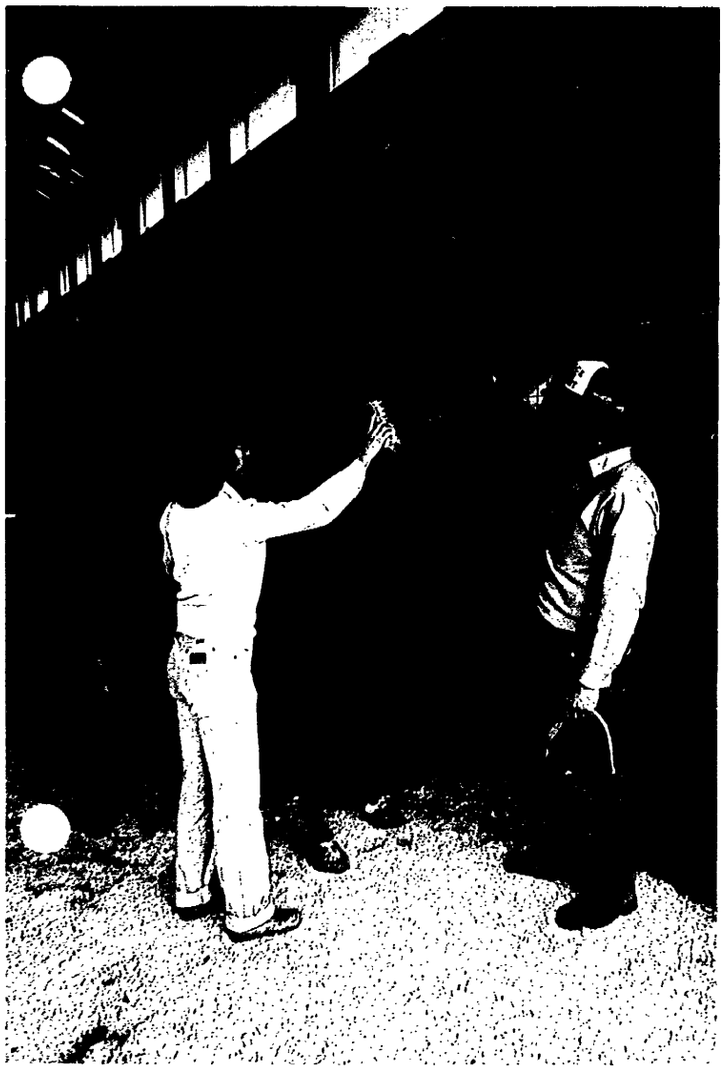
No other preservative treated wood helps crops grow better than Osmose brand pressure treated wood. Oil-based preservatives leave surface residues and vapors which can be harmful and even toxic to plants. The oil-based preservatives can leach into the soil, quickly killing delicate root systems, while the vapors and even the preservative itself may be absorbed by the leaves, killing the upper portion of the plant.

Osmose K-33 preservative leaves no harmful vapors or surface residues to damage valuable crops. Osmose brand used for decades to support tomato plants, while Osmose brand stakes and posts have been readily accepted by grape, hop and kiwi farmers. The stakes support the crops, eliminate frequent replacement caused by rot, decay or termite damage and prevent the spread of stake-born disease from field to field. Even mushrooms grown in Osmose brand pressure treated wood trays thrive with no adverse affects.

Osmose brand pressure treated wood continues to protect farm crops even after harvest. Corn silage and haylege can be stored in upright or bunker silos with no migration of preservative into the forage. This is a common problem with oil-borne preservatives, often leading to a significant loss of valuable feed. Osmose brand pressure treated wood eliminates feed loss, increasing farm profit.



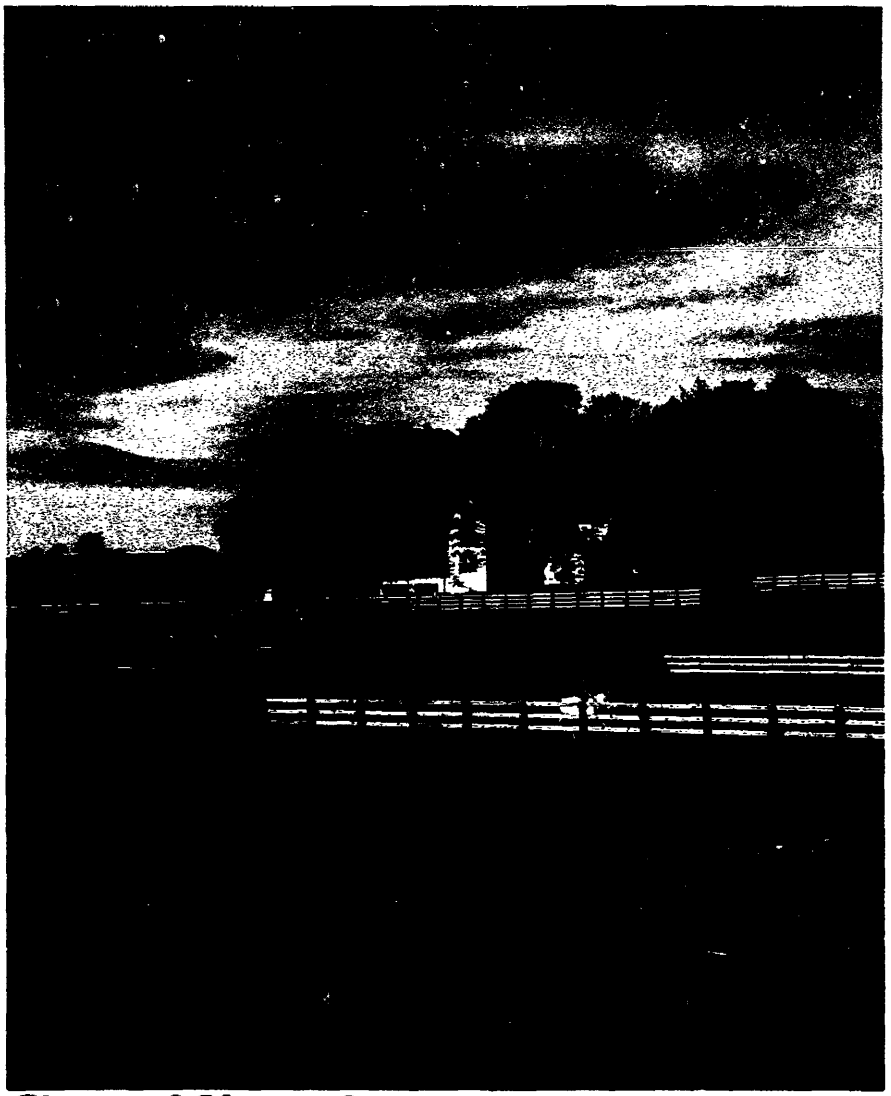


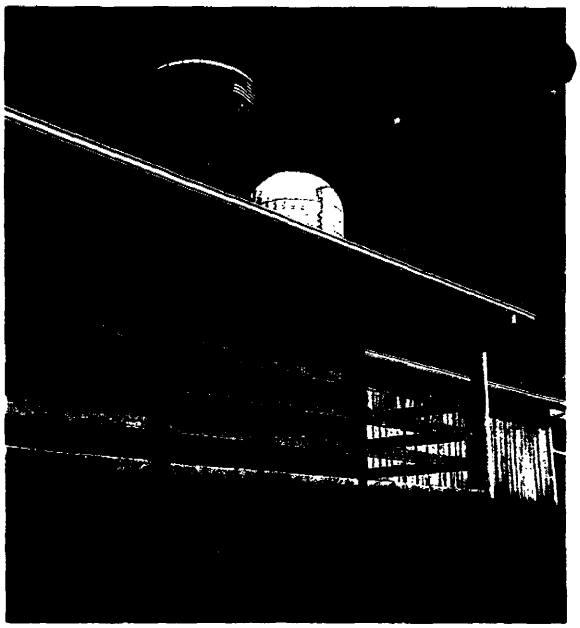


RELIABLE LIVESTOCK ENCLOSURES

Osmose brand pressure treated lumber is environmentally safe for all types of farm livestock. Osmose K-33 preservative is carried into the wood by water. After treatment, the preservative undergoes a chemical fixation process, bonding permanently with the wood fibers. As the water evaporates from the wood it leaves the surface clean, dry and free of harmful vapors. The cleanliness of Osmose brand pressure treated wood makes it the ideal building material for use in confined housing and livestock enclosures, barns, shelters, laying parlors, and even feed troughs. There are no caustic surface residues which might cause skin irritation, nor harmful vapors which could cause discomfort . . . important factors to consider since animal weight gain and productivity are related directly to animal comfort and health.

Farm fencing is another popular use of Osmose brand post and lumber. Wood posts can absorb the stress and shock of livestock rubbing or bumping into them and return to their original shape. Steel posts, on the other hand, often become permanently bent by such abuse. For pasture fencing, barbed wire can be nailed directly to the posts, or wire can be connected to easily attached insulators for electrified fence applications. Large wooden posts also make ideal attachments for high tension wire fencing, popular in various parts of the country.





Specifications

All timbers, lumber and plywood herein specified for treatment shall be pressure treated with Osmose K-33 preservative which meets AWPA Standard P-5 and Federal Specification TT-W-550. Osmose K-33 preservative shall be applied in a closed cylinder by vacuum-pressure process in accordance with the approved standards and recommended treating practices as listed in AWPA Standards C-2 and C-9 or the appropriate AWPA standard covering the commodity treated and as listed in Federal Specification TT-W-571. Treated wood products may be specified to conform to the American Wood Preservers Bureau Standards LP-2 (Above Ground Use), LP-22 (Ground Contact) and FDN (Foundations).

The retention of Osmose K-33 shall be 0.25 lbs. per cubic foot of wood (oxide basis) for moderate service (weather exposure) and 0.40 lbs. per cubic foot of wood (oxide basis) for severe conditions (in contact with ground or fresh water).

Where it is found necessary to frame Osmose brand pressure treated lumber on the job site, a special Osmose preservative shall be liberally brushed onto all cut surfaces, bolt holes and machined areas.

In most uses lumber 2" nominal and less shall be dried to a 15-19% moisture content. Where shrinkage is a serious problem as in roof decking, flooring or sub-flooring, all lumber shall be dried to a 15-19% moisture content. In accordance with AWPA Standard C-9 plywood shall be dried after treatment to a moisture content of 15% or less except that drying may be waived by the purchaser.

*Osmose K-33 is a registered trademark of Osmose.

OSMOSE® WOOD PRESERVING DIVISION

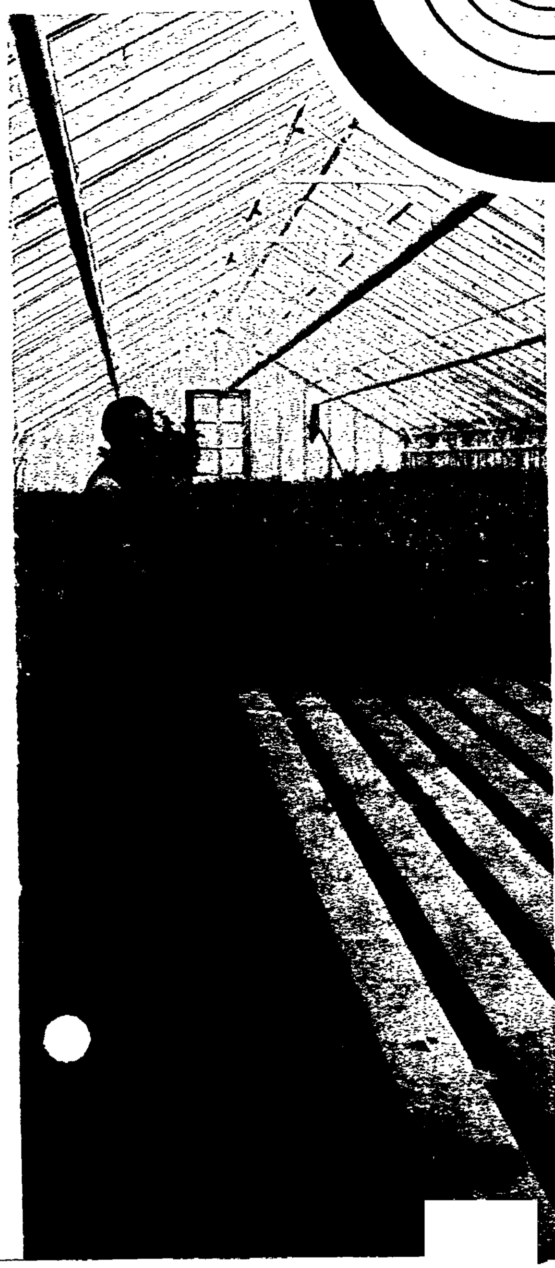
980 Ellicott Street
BUFFALO, NEW YORK 14209
(716) 882-5905

P.O. Drawer O
GRIFFIN, GEORGIA 30224-0249
(404) 228-8434

K-33®

PRESERVATIVE TREATED WOOD

Osmose®



K-33

DECAY AND TERMITE RESISTANT WOOD

Each year, termites, decay and other wood-destroying elements cause losses amounting to millions of dollars. Numerous wood structures are rendered useless or need expensive repairs because of this hidden damage. As experienced builders know, destructive activities in wood may go undetected for months or years under a smooth coat of paint. Healthy wood fibers are actually eaten away, leaving but a tissue-thin wall. Osmose K-33 is a pressure vacuum-applied preservative that repels such attacks by wood destroyers and provides from 300 to 500% longer life than untreated wood.

Osmose K-33 is Chromated Copper Arsenate Type II preservative. It is pressure-applied into the wood fibers using water as a carrier. The chemicals are then permanently fixed in the cellular structure of the wood by chemical reaction, after which excess moisture is removed from the treated wood. At very reasonable costs, Osmose K-33 treated lumber and plywood can be specified for all critical spots in any structure . . . siding, sleepers, roof decking, trim, steps, railings, deck sills, plates, etc. The small difference in price is far less than the cost of ordinary wood maintenance and repair. Over eighty Osmose franchised treating plants are located coast-to-coast. Your nearest plant offers fast, dependable service.

Osmose K-33 offers these proven advantages:

toxic, yet safe Wood treated with Osmose K-33 is highly toxic to wood-destroying fungus, mold, and rot. It also repels wood-destroying insects such as powder post beetles, carpenter ants, termites (including the Formosen termite) and marine borers, thus eliminating the damage caused by these pests. Osmose K-33 is, however, non-toxic to higher forms of life making it completely safe for use around livestock and humans.

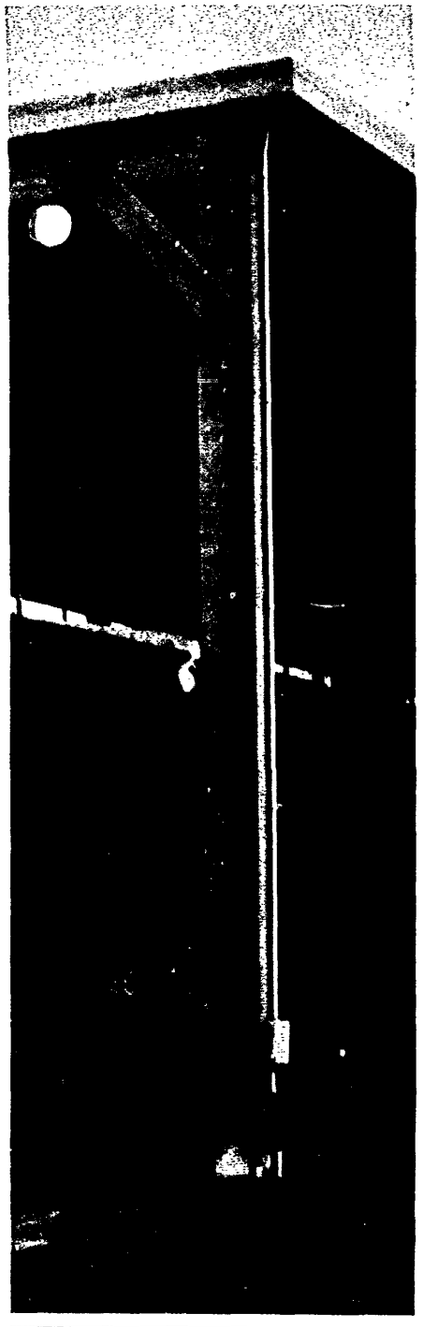
permanent Because of the chemical reaction that fixes K-33 in the cell structure of wood, Osmose K-33 is a permanent preservative. It is non-leachable and can be used in the ground as well as in contact with fresh water with no concern for the weakening of the chemicals or the preservative qualities.

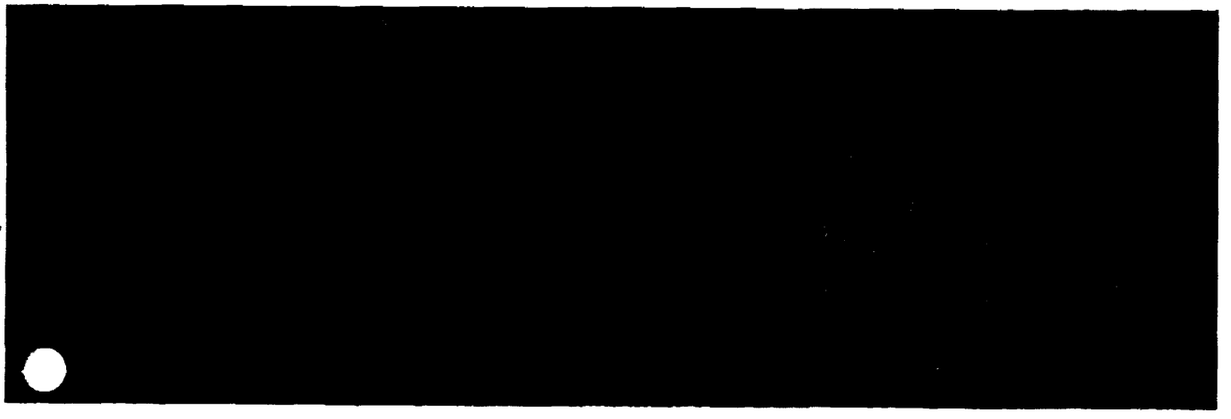
clean and odorless Osmose K-33 is completely clean. Because of its chemical make-up and the fact that no messy carriers are used during the treating process, it is clean to handle, dry to the touch and emits no offensive odors or eye irritating fumes. Contact with Osmose K-33 lumber does not cause skin irritation. It is also non-corrosive to metal fastenings.

maintenance-free Material treated with Osmose K-33 has a very pleasing light green hue for a maintenance-free surface. This can be readily changed by using commercial stain or paints according to manufacturer's recommendations.

presents no fire hazard Since K-33 is carried into the wood in a water solution rather than petroleum gas or oil, it is not subject to the possibility of increased combustion as are some preservatives. In fact, Osmose K-33 increases the fire resistive nature of wood slightly.

highly effective Osmose K-33 is equal to or better than any other commercially used preservative. According to tests by the U.S. Department of Agriculture, Forest Products Laboratory, Madison, Wisconsin, in a comparison after 17 years in contact with the ground, Osmose K-33 outperformed other commonly used preservatives.





Some of the many uses of Osmose K-33

residential

Patios, balconies, trim, siding, sills, sleepers, fences.

industrial

Warehouses, shipping terminals, wet process industries, loading docks.

recreational

Stadium seating, swimming pools, amusement parks, outdoor furniture.

utilities

Telephone, transmission and distribution poles.

light construction

Office buildings, churches, stores, shopping malls.

municipalities

Highway guard rail posts, and sign posts, picnic tables and shelters, beach houses and boardwalks.

agricultural

Barns, livestock ramps and enclosures, fence posts, pole buildings.

marinas

Decking, stringers, boat storage sheds, cradles.

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Incoming Watts:
800-241-0240

K-33

DECAY AND TERMITE RESISTANT WOOD

osmose®

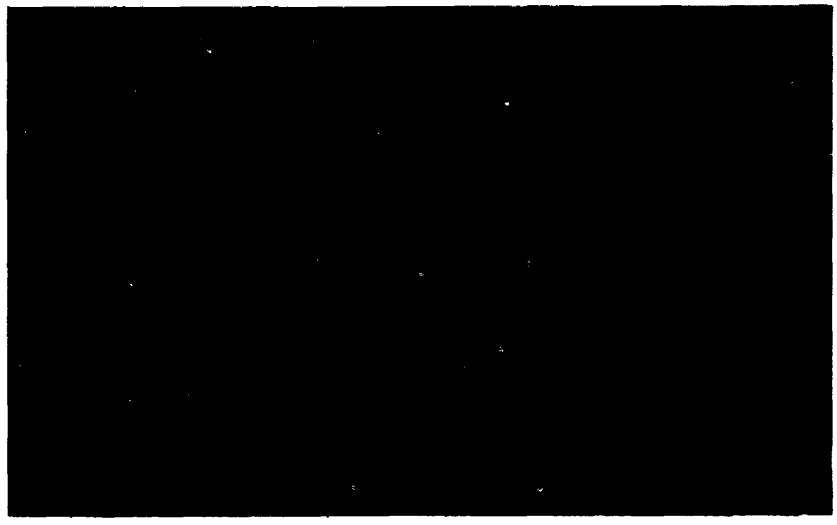
There are more than 80 Osmose franchised plants in the United States offering fast, dependable service for pressure treated lumber.

Osmose pressure treated wood is of the highest quality. Lumber and timber pressure treated at an Osmose treating facility adheres to the rigid quality requirements set by the AWPA Standards.

The experienced staff of Osmose Engineers continually checks plant operation to assure that all treating procedures meet the Standards required for high quality preservative treatment which is synonymous with Osmose.

The Research Department of Osmose continually checks specimens of treated wood, treating reports and chemical balance to assure that there is no variation from the quality demanded by Osmose customers.

Newly installed Osmose treating plants are completely automated for one man operation. Push button controls accurately govern treating cycles, pressures and retentions to extremely close tolerances. All components...pumps, pipes, valves, tanks and retort cylinder...have been carefully selected or custom-fabricated to exacting specifications. No effort has been spared to make each Osmose treating plant the finest in the field.



approvals

Federal Specification TT-W-550 and TT-W-571** (latest revision)
Federal Housing Administration
Veterans Administration
U.S. Corps of Engineers
U.S. Bureau of Public Roads
American Association of State Highway Officials
Numerous state, county and municipal groups, authorities and associations.

specifications

All treated lumber or timber specified herein shall be impregnated with Osmose K-33 which shall meet or exceed Federal Specification TT-W-550*. Osmose K-33 shall be applied in a closed cylinder by vacuum-pressure process, full cell method, in strict accordance with the recommended practices of the American Wood Preservers Association Standard C2-69** which states that the retention of dry salts shall be .23 pounds per cubic foot of wood (oxide basis) for moderate service conditions (exposure to weather but not in constant contact with ground or water) and .40 pounds per cubic foot of wood (oxide basis) for severe service conditions (in constant contact with ground or water).

Where it is found necessary to frame Osmose-treated lumber on the job, Osmose Special K-33 preservative shall be liberally brushed onto all cut surfaces, bolt holes and machined areas. Where Osmose-treated lumber will be in contact with plaster, stucco or terrazzo, lumber shall be dried and edges shall be treated with aluminum paint to avoid staining. Where shrinkage is a serious fault as in flooring or sub-flooring all lumber shall be dried to a 15-19% moisture content. Where finish schedule calls for Osmose-treated lumber to be painted, excess preservative shall be removed. Lumber shall be dried to 15-19% moisture content and knots and pitch streaks shall be sealed as with other wood. Prime with aluminum paint before applying water-borne paints.

*Federal Specification TT-W-550 is the new Specification for Copper Chrome Arsenate type wood Preservatives and Osmose K-33 is included in this specification as Type II.

**American Wood Preservers Association Standard C2-69 eliminates trade names and specifies Chromated Copper Arsenate which is the chemical name for Osmose K-33. Therefore, Osmose K-33 is included under this specification.

see our catalog in Sweet's (S)

OSMOSE

K-33® Pressure Treated Wood for Marine Construction

Introduction

For marine construction, wood offers more advantages and has greater versatility than any other building material. It is strong, readily available, comparatively low in cost, and easy to install and maintain.

Wood, above all, is extremely durable. It will last for hundreds of years if not attacked by wood destroying organisms. In marine applications, such organisms as decay-causing fungi, insects, and marine borers can weaken and destroy wood structures.

The surface application of preservatives on wood by brushing, spraying, or dipping yields little penetration and therefore does not prevent deterioration under attack by insects, fungi, or borers.

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of America, Inc.
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Osmose K-33®
Pressure Preservative Treated Wood

Osmose K-33 preservative is applied to the wood by a highly scientific vacuum and pressure operation that forces the chemical deep into the cellular structure of the wood. The chemical used, chromated copper arsenate, makes Osmose K-33 wood unpalatable as a food source for destructive organisms, thus providing permanent protection.

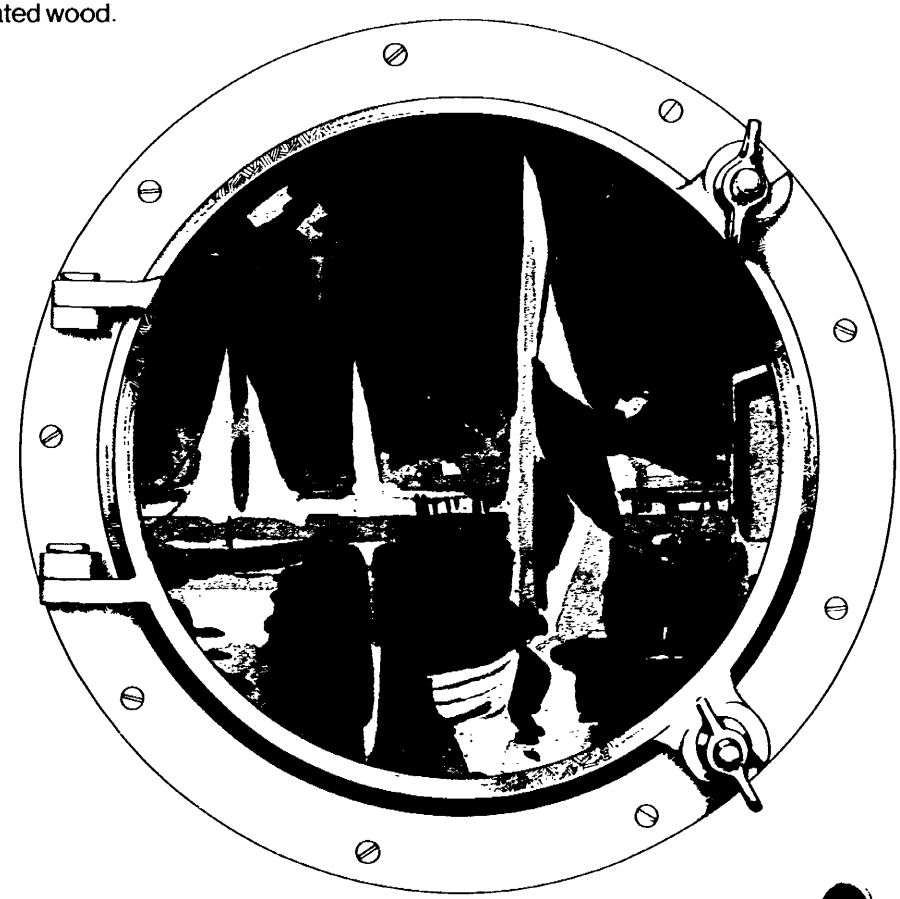
Since the preservative is chemically bonded to the wood cells, it is leach-resistant even under severe conditions of continuous wetting and drying or in direct contact with salt or fresh water. It cannot dissolve out to stain clothing, be tracked away, or pollute the environment.

In addition, this treatment results in a product that will not contaminate its surroundings, is pleasing in appearance, and is free from objectionable qualities of many other wood preservatives.

The light gray-green coloration imparted to the wood by the preservative is eye-appealing and blends harmoniously with any surrounding.

Since 1937, Osmose has been a leader in the research and development of wood treatment methods designed to prevent the attack of wood-destructive elements. Today, Osmose K-33 pressure preservative treated wood can be recommended for any end-use where exposure to fungi, insects, and marine borers is likely to be encountered.

The marine applications for Osmose K-33 pressure treated lumber, timbers, and piles are virtually unlimited and it is the objective of this brochure to stimulate your awareness of the qualities and versatility of Osmose K-33 pressure treated wood.

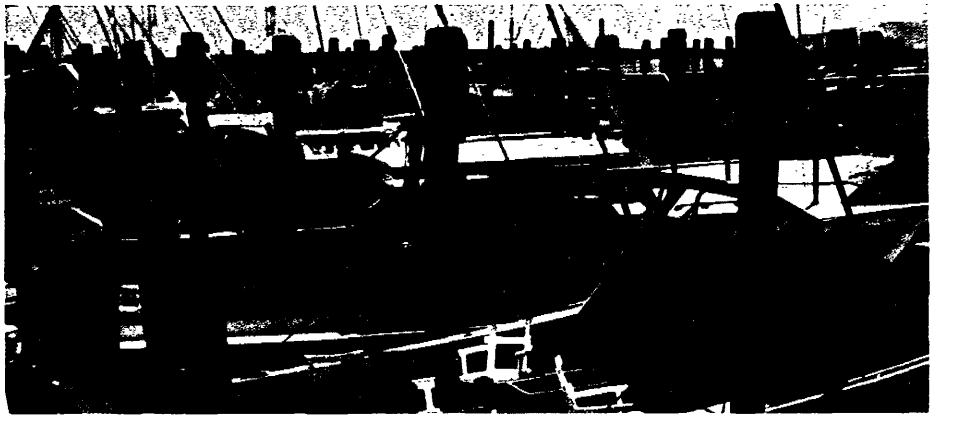


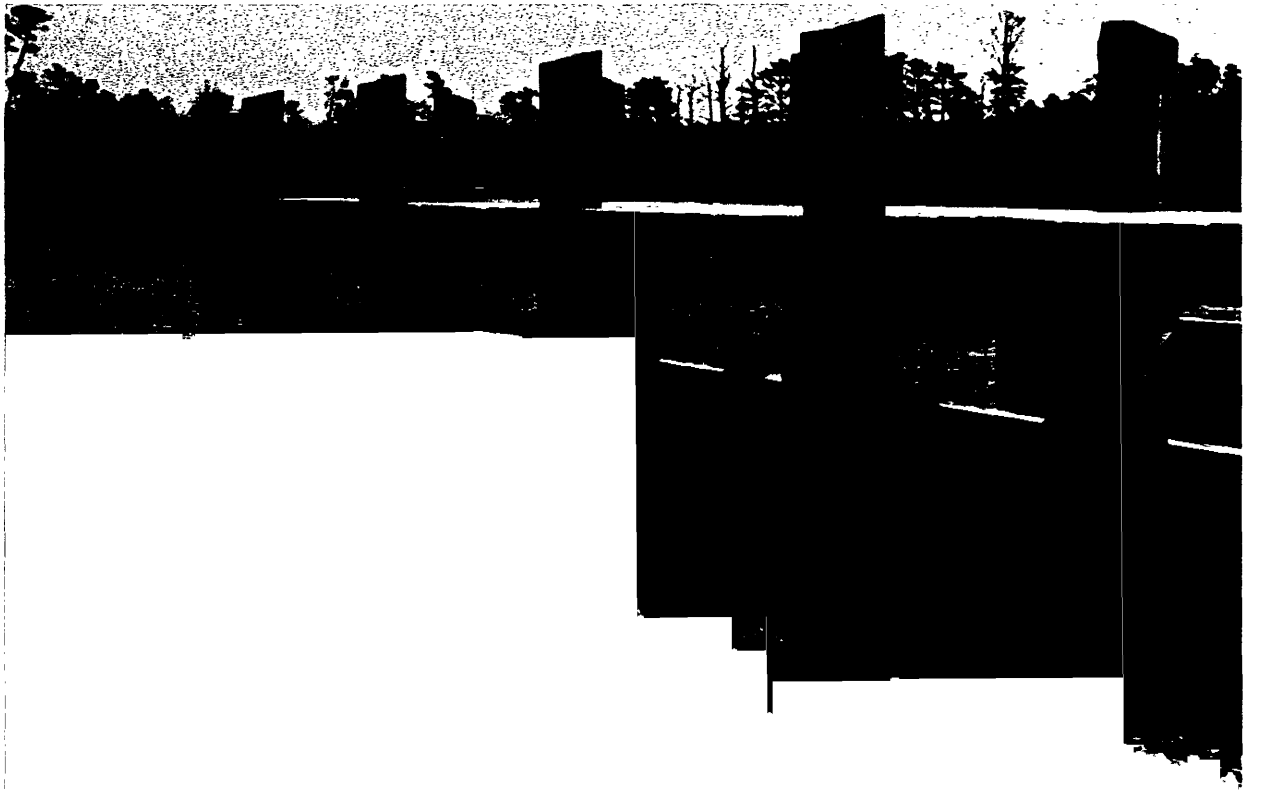
Pilings

A structure can be no stronger than the foundation it is built upon. Consequently, selection of the right material for any foundation member is of utmost importance. Perhaps the most significant property to consider in choosing foundation material is compression strength. Wood has very high compression strength, higher in proportion to its weight than steel. And that accounts for its widespread use in foundation and building support applications.

In marine construction, foundations often take the form of piling. But piles are subject to such adverse environmental conditions that untreated wood is unsatisfactory. The continual wetting and drying action at the water line encourages fungi growth. In salt water applications, marine borers pose another threat. Even some treated woods are unsuitable for piles if they are impregnated with chemicals or methods which permit leaching of the protective chemicals under continued tidal and wave action.

The Osmose K-33 pressure preservative treatment overcomes these problems and makes it feasible to take advantage of the innate strength and durability of wood for marine piling. With the preservative material chemically bonded to the wood fibers, such piling are leach-resistant and offer long lasting protection against attacking organisms.





[illegible]

Each year vast amounts of land are washed away, leaving waterfronts that are unsightly and undesirable as recreation areas. The cost to the landowner in dollars and to the environment in lost soil resources is [illegible].

[illegible] marine bulkheading has been installed along shorelines to protect [illegible] land and marina owners and [illegible] of valuable natural resources.

Since the installation of bulkheading requires [illegible] amount of expertise and the use of special equipment, it is best left to the professional contractor.

The marine contractor has the alternative of building the bulkhead of wood, steel, aluminum, or concrete. Wood is advocated because of its usual lower cost, durability and ease of installation.

The conventional sheet-pile wall, held in line by piles and timber walers, is one of the most common type of timber bulkhead. Backfilling adds to the stability of the bulkhead and extends the shore property out level to the water front.

Because some sections of the wooden bulkhead alternate from being wet to dry, and the upper sections are usually totally dry, conditions are right for rapid deterioration of untreated wood. Osmose K-33 pressure treatment provides the protection needed to withstand this adverse environment and give long life to the bulkhead structure.

Piers and docks

To any marina, piers and docks are the functional sections that provide the slips or berths for the boats and allow easy access to them. There are basically three types of piers and docks: fixed, floating or a combination of both.

The fixed pier is fastened to or supported by piles which are driven into the underlying marine bottom. Main piers are usually eight feet in width, although, for reasons of economy, six foot piers are sometimes used. Twelve foot piers are normally installed at commercial and fueling facilities.

The width of floating piers can be the same as that of fixed piers. However, their construction differs in that they are usually installed in standard size sections which are hinged together to provide flexibility against wave action.

Fixed docks are usually three feet wide and come in a variety of sizes and shapes and are connected to the main piers. Floating docks should be wider than the fixed type in order to provide greater stability.

Both floating piers and docks are designed to float eighteen to twenty-one inches above the surface of the water when load free. Wooden piles are utilized to guide them except when anchor cables and counter-weights are used for deeper water.

Wood offers the most advantages of all marine building materials for piers and docks, not only because of its lower cost factor, but because it is easier to install

The fact that Osmose K-33 is a non-oil borne preservative treatment, it reduces the hazards of slippery surfaces that are associated with marinas.

In addition, Osmose K-33 chemicals are bonded into the wood where they will not be tracked from pier or dock to the boat, nor will they stain clothes and other items as with other wood treating processes.

Yet Osmose K-33 pressure treated wood offers strength and durability while remaining maintenance-free.

Limnoria attack the wood from the exterior surface, making their presence observable as the characteristic hour-glass destruction at the water line. Unlike the Teredinidae, the Limnoria do not become imprisoned in the wood and are free to move about. The Limnoria attack wood in such great numbers that the outer shell of infested timber becomes thoroughly honeycombed at the attack point and the little solid wood remaining is eroded away by wave action.

To protect marine piling, timbers and structures from these destructive marine borers, Osmose K-33 pressure treated wood assures you of lasting protection.

FUNGI

Several species of saprophytic fungi cause decay of seasoned wood by feeding on the cellulose. This low form of plant life thrives under moist conditions and will be found not only along the seacoast, but in the vicinity of fresh water lakes and rivers and elsewhere.

These fungi penetrate to the interior of timbers and consume the wood fibers, leaving the timbers brittle. They are white rot, brown rot and soft rot, a name derived from the powdery appearance of the decayed wood.

If wood were kept completely dry, it would escape fungi attack. But in marine construction this is an obvious impossibility. The best defense is to use Osmose K-33 pressure preservative wood treatment which permanently deprives the fungi of cellulose, their food source.

Properties of Osmose K-33® Treated Wood

SPECIFICATIONS

All lumber, timber and piles herein specified for treatment shall be pressure treated with Osmose K-33 preservative which meets or exceeds American Wood Preservers Association Standard P5. Osmose K-33 shall be applied in a closed cylinder by vacuum pressure process, full-cell method in strict accordance with the recommended practices of the AWPA Standards. Retentions shall be in accordance with the appropriate AWPA commodity standards or as listed in this specification. When treated wood is to be painted or otherwise finished, or where shrinkage is a problem, the material shall be dried after treatment to remove excess moisture. Two brush coats of Osmose Special K-33 treating solution shall be applied to all field cuts made after treatment on hard-to-treat species.

STANDARDS & APPROVALS

Federal Specifications TT-W-550 and TT-W-571
American Wood Preservers Assoc.
The Naval Engineering Facilities Command
U.S. Corps of Engineers
Federal Housing Administration
Department of Housing and Urban Development
Veterans Administration
American Association of State Highway Officials
Air Force
General Services Administration
All Model Building Codes
State Highway Departments
Local and City Building Codes

AVAILABILITY

Osmose K-33 Wood Preservative is available from a broad network of treating plants and lumber distributors throughout the United States.

Retentions of Osmose K-33 For Marine Use

USE	RETENTION LBS./CU. FT. (Oxide Basis)
Piles in Salt Water	2.5 1.5
Lumber or Timbers in Salt Water	2.5
Lumber or Timbers not in Contact with Salt Water but Subject to Splash	0.60
Lumber or Timbers not in Contact with Salt Water and not Subject to Splash	0.40

Retentions of Osmose K-33 For Land and Fresh Water Uses

USE	RETENTION LBS./CU. FT. (Oxide Basis)
Lumber or Timbers Above Ground Use	.23
Lumber or Timbers Ground Contact	.40
Utility or Building Poles	.60
Land and Fresh Water Piles	.80 1.00*
Foundation Piles	.80 1.00*

*Retentions depend on the species used.

World-Wide Marine Borer Tests

MARINE BORER TESTS
by William F. Clapp Labs.
Wrightsville Beach, North Carolina

Panels set May 30, 1954
Last inspection report January 24, 1972

Treatment	17.5 Years Exposure Retention	Condition
K-33	2.60 lbs./cu. foot	Still sound
K-33	2.61 lbs./cu. foot	Still sound
K-33	2.59 lbs./cu. foot	Still sound

MARINE BORER TESTS IN PHILIPPINE WATERS
by Forest Products Research Institute

Treatment	3 Year Exposure Retention	Condition
K-33	.59 lbs./cu. foot	Still sound
Creosote	14.5 lbs./cu. foot	Still sound

Conclusion: K-33 at .59 lbs. per cu. foot, compared favorably with Creosote treatment at 14.5 lbs./cu. foot in protecting specimens in Philippine waters against marine borer infestation.

MARINE BORER TESTS
by Swedish Wood Preservation Committee
Kristinsberg Zoological Station

Panels set December, 1947
Last inspection report July, 1963

Treatment	16 Years Exposure Retention	Condition
K-33	1.32 lbs./cu. foot	Still sound
K-33	1.41 lbs./cu. foot	Still sound
K-33	1.52 lbs./cu. foot	Still sound

MARINE BORER TESTS
by Centre Technique Forestier Tropical
France (Ivory Coast, Africa)

Treatment	1 Year 9 Months Exposure Retention	Condition
K-33	1.80 lbs./cu. foot	No attack
K-33	2.65 lbs./cu. foot	No attack
Creosote	40.0 lbs./cu. foot	Attack starting after 5 months

Round Timber Piles Exposed to Moderate or Severe Marine Borer Hazard

	SOUTHERN YELLOW PINE RED PINE	COASTAL DOUGLAS FIR
MODERATE BORER HAZARD		
Creosote[1]	20.0	20.0
Creosote-coal tar[1]	20.0	NR[3]
SEVERE BORER HAZARD		
Limnoria tripunctata CCA[2]	2.50 and 1.50	2.50
Limnoria tripunctata and Pholads (Dual treatment)		
First treatment — CCA	1.00	1.00
Second treatment		
Creosote[1]	20.0	20.0
Creosote-coal tar[1]	20.0	NR[3]

OTHER MEMBERS USED IN MARINE CONSTRUCTION

MATERIAL AND USEAGE	CCA	CREOSOTE[1]	CREOSOTE-COAL TAR	PENTACHLORO-PHENOL
Timber Exposed to Tides or Wave Action:[4]				
Southern Pine	2.50	25.0	25.0	NR[3]
Coastal Douglas Fir and Western Hemlock	2.50	25.0	NR[3]	NR[3]
Land and Fresh Water Piles:				
Southern Pine, Ponderosa Pine, Red Pine and Jack Pine	.80	12.0	12.0	.60
Douglas Fir, Lodgepole Pine and Western Hemlock	1.00	17.0	17.0	.85
Members Out of Water but Subject to Salt Water Splash and in Ground Contact:[5]				
Southern Pine, Coastal Douglas Fir, Western Hemlock	0.60	12.0	12.0	0.60
Members Out of Water and Not Subject to Salt Water Splash and Not in Ground Contact:[6]				
Timber — All Softwood Species	0.40	10.0	10.0	0.50

NOTE:
[1]When these preservatives are specified for material to be used in salt water, the creosote-coal tar shall conform to Standard P12, and the creosote shall conform to Standard P13.
[2]The assay retentions for southern pine and red pine are based on two assay zones; 0 to 0.50 inch and 0.50 to 2.0 inches.
[3]NR — Not Recommended
[4]1.50 lbs. per cu. ft. is often recommended when borer hazard is less than severe. This recommendation is based on test results from Sweden, Europe, the Philippines and the United States.
[5].40 lbs. per cu. ft. may be recommended for lumber and timber in ground contact.
[6].23 lbs. per cu. ft. may be recommended for lumber and timber when used above ground.

SEE SWE 6.5/Os 6p

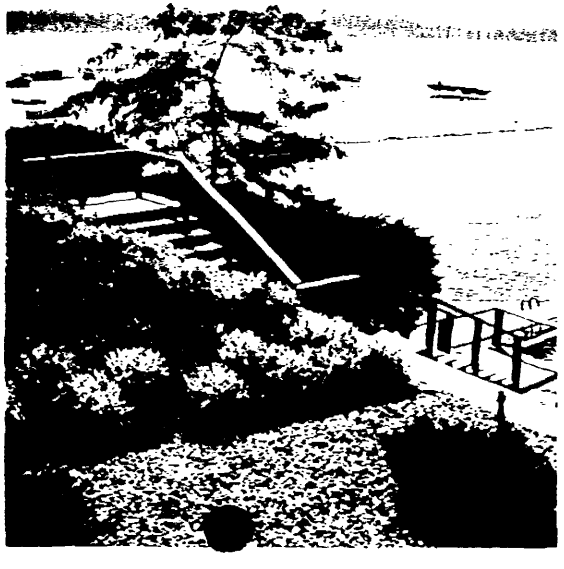
Breakwaters

One of the main functions of a marina is to provide a protected water area for owners of commercial and pleasure craft. Agitated water surfaces cause movement of the crafts which can result in undue damage.

To provide a protective water area, the construction of a wall or breakwater on the open or seaward side of the marina may be necessary. The breakwater also should be situated to provide a serviceable entrance channel and turning area.

To disrupt or break up the currents, waves and wakes before they reach the marina slip area, the breakwater must be sturdy and durable enough to adjust to the deviation of water pressures.

The structural integrity of the breakwater is prolonged by utilizing Osmose K-33 pressure treated planking and pilings.



On-shore structures

Enjoyment of the practicality, strength, durability, and beauty of Osmose K-33 pressure treated wood does not have to end at the water's edge. Buildings above the shoreline can benefit greatly from its use since these structures are subject to rotting and decay due to sustained dampness.

Osmose K-33 pressure treated wood is the perfect building material for all shore construction because it offers the beauty and warmth of wood while being maintenance free while providing long lasting

protection against problems presented by waterside exposure. K-33 provides more than 300% longer life than untreated wood. In tests conducted by the U.S. Department of Agriculture, Forest Products Laboratory, wood stakes treated with Osmose K-33 type preservatives have had no failures after 23 years in contact with the ground and are outperforming all other types of preservative protection.

Whether off-shore or on, Osmose K-33 pressure preservative treated wood offers great flexibility in marine construction and can be used with confidence that the structures in which it is incorporated will be around for many years to come.

Principal Wood-Destroying Organisms Controlled by Osmose K-33

MARINE BORERS

Submerged portions of marine piling and marine timbers are under constant attack by certain wood-boring animals, classified under the general term of Marine Borers.

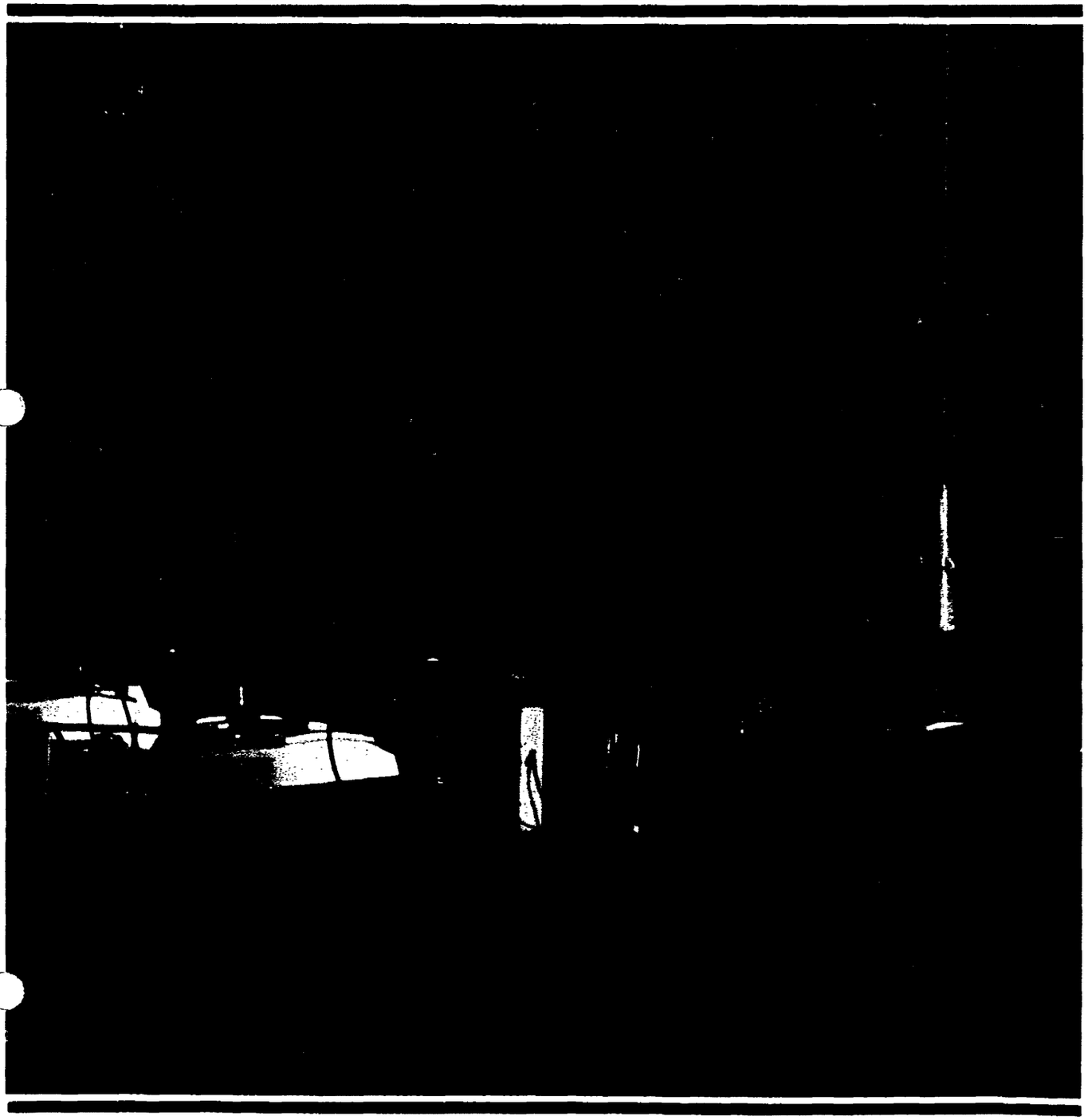
These destructive marine animals are prevalent in most salt or brackish waters along the Pacific, Gulf and Atlantic coastal regions of the United States. Marine structures initially constructed of properly treated wood are protected against borer destruction even when marine borers reach epidemic proportions.

Marine Borers can be classified into two distinct groups, depending upon their general physical structure and method of wood attack. These classifications are either molluscan borers or crustacean. The molluscan borers (Teredinidae) are generally called Teredo, bankia or shipworms, which are distantly related to clams and oysters. The crustacean borers are related to lobsters and crabs and are generally identified as Limnoria, sphaeroma and chelura.

Teredinidae enter submerged wood as minute, free-swimming larvae and bore in by rotating their shells cutting into the wood. Their bodies grow larger as they bore deeper into the wood. As more individuals enter the wood and each continues to grow, the entire center of a piece of wood may be destroyed, causing loss of strength without any visible evidence of such attack on the wood surface.

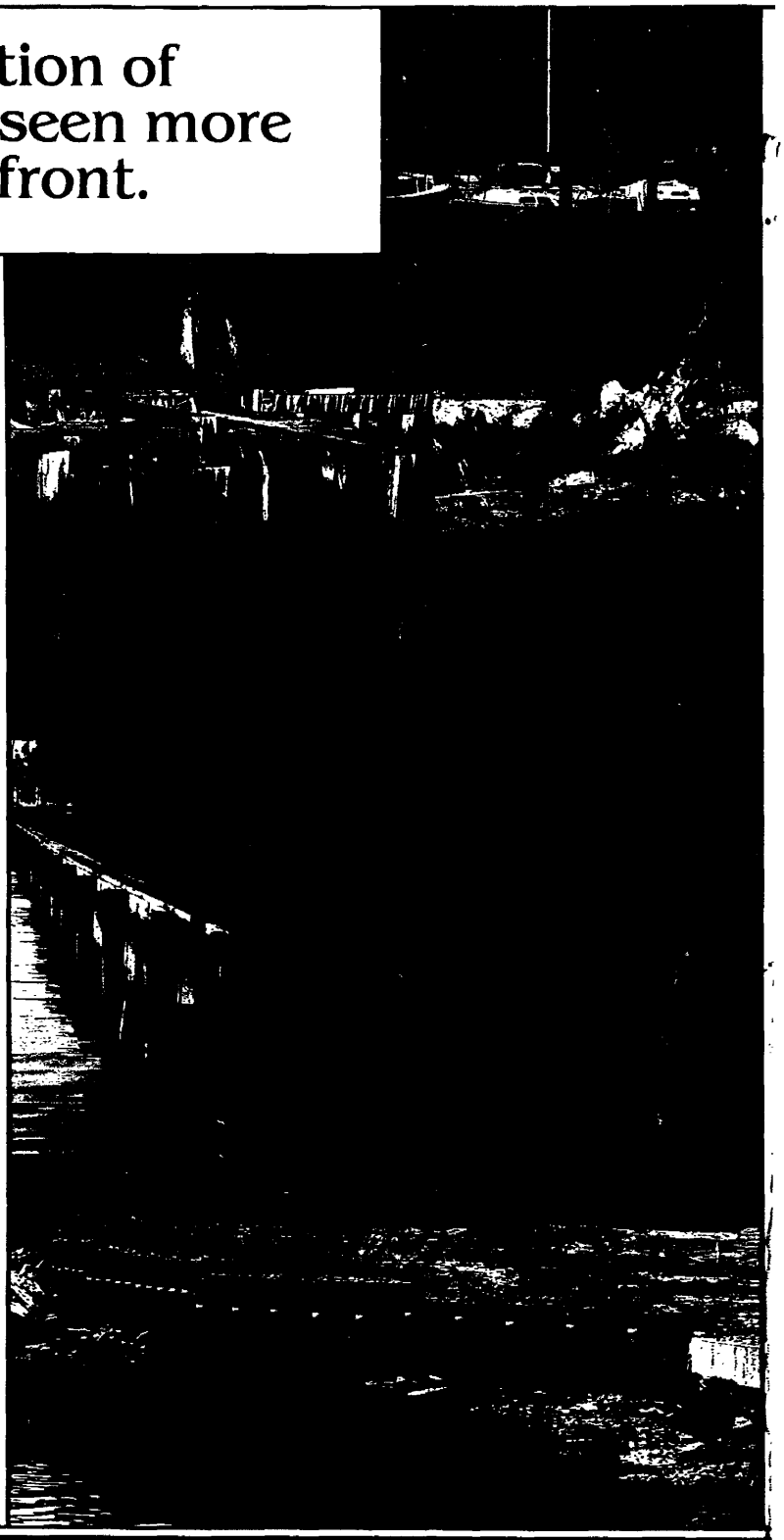
OSMOSE

Brand Pressure Treated Wood For Marine Applications



The Need For Shoreline Protection

Nowhere can the interaction of water, wind and land be seen more clearly than at the waterfront.



Wave and current action constantly remove and replace large amounts of material, changing shorelines in the process.

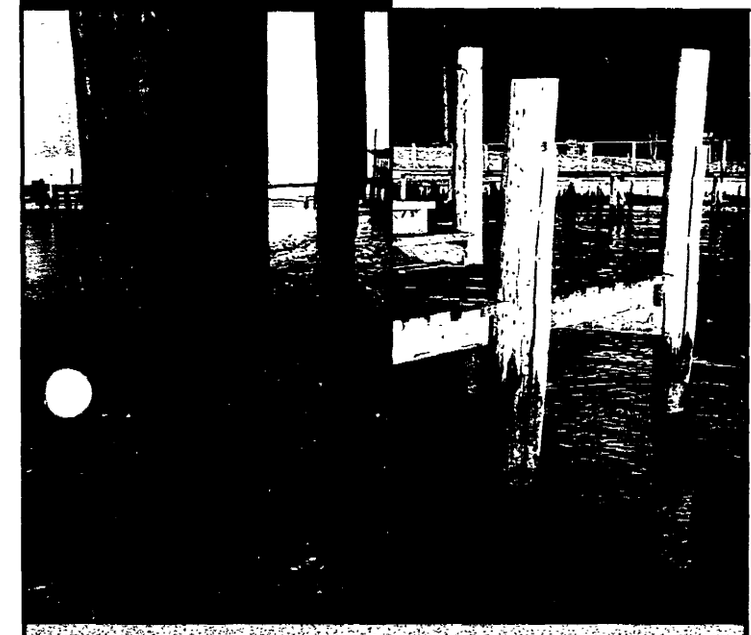
Where the removal of material is balanced with the deposit of an equal amount of new material, the change often goes unnoticed. It is when more material is deposited than removed or more removed than deposited that problems can arise. Such problems might include the undermining of onshore structures or the filling in of coves and bays.

The deposition and erosion of shorefront can be controlled with low cost shore protection structures. These structures may be designed to accomplish one of two objectives: 1) maintain the existing shoreline by controlling erosion of material; 2) extend the shoreline by adding to the accretion process and reducing erosion.

While many materials exist for the construction of shorefront structures, the easiest and most economical for the property owner to install is Osmose brand pressure treated timbers, piling and lumber. The materials are relatively light in weight, easy to handle and readily available. Osmose brand pressure treated wood offers many other advantages to the property owner as well. It won't pollute the environment or harm fish or plant life. It is not effected by the erosive action of currents and waves. It will not corrode, spall or be damaged by freeze/thaw cycles. If structural damage does occur, repair or replacement is easily accomplished with common hand tools and Osmose brand pressure treated wood.

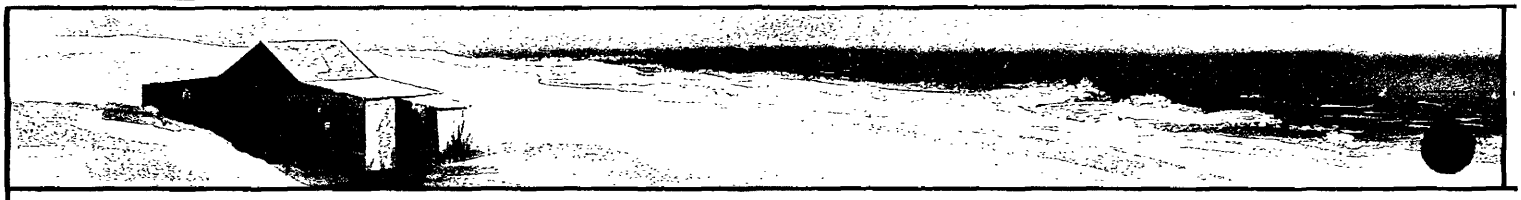
Wood In The Marine Environment

There is no exposure condition which presents a greater hazard to wood's service life than use in salt water.



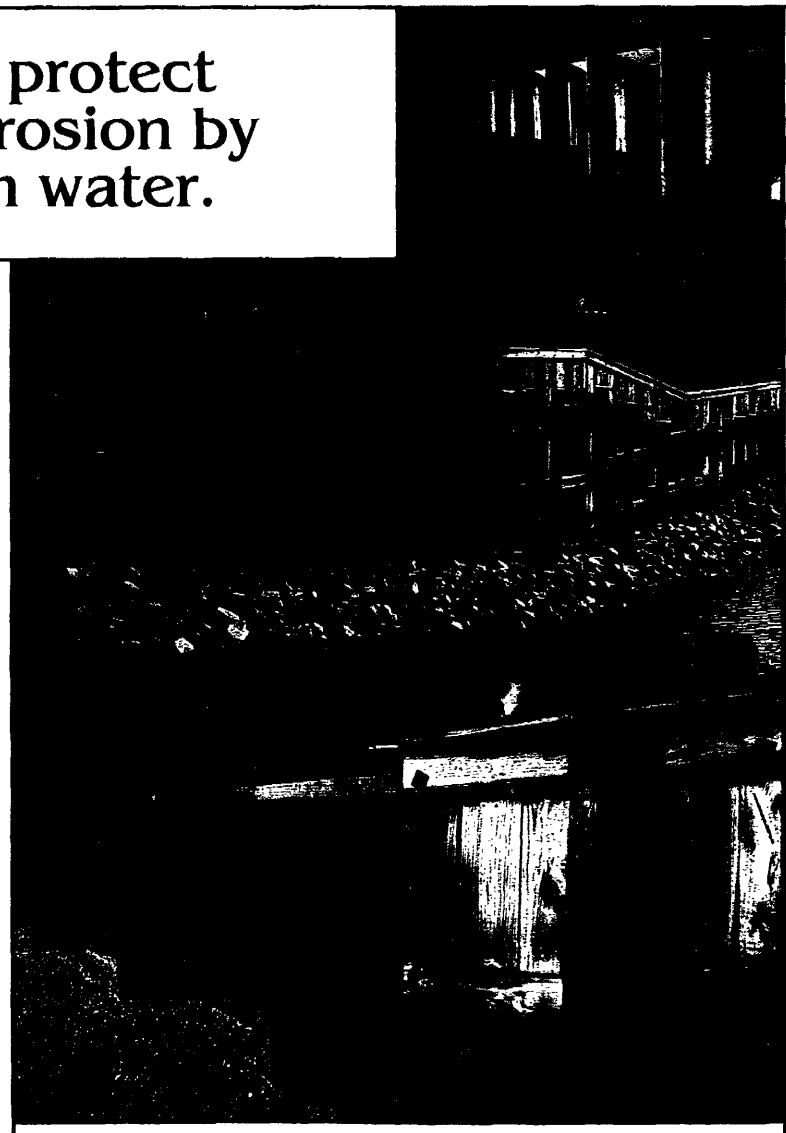
The wood is subject to continued wetting and drying cycles, a condition highly favorable to decay. Even more significant, sea water contains wood-boring marine organisms that can make quick work of untreated wood. These organisms fall into two general groups: 1) the molluscan borers, related to oysters and clams and represented by the shipworms*(teredo* and *bankia)* 2) crustacean borers, related to lobsters and crabs and represented by *limnoria, sphaeroma* and *chelura.*

Shipworm damage is limited to the interior of the wood. As the animal grows, it forms a honeycomb network of tunnels. Shipworm damage can jeopardize structural strength in less than a year. Damage caused by crustacean borers is more gradual and easily detected, as these organisms work mainly at the intertidal zone. Their damage is close to the surface of the wood, and as the wood is weakened, it is eroded by wave action, producing an hourglass shape to the wood piling. Crustacean borers typically require at least a year to accomplish the amount of damage caused by shipworms in a few months.



Bulkhead and Seawalls

Bulkheads and seawalls protect banks and bluffs from erosion by separating the land from water.

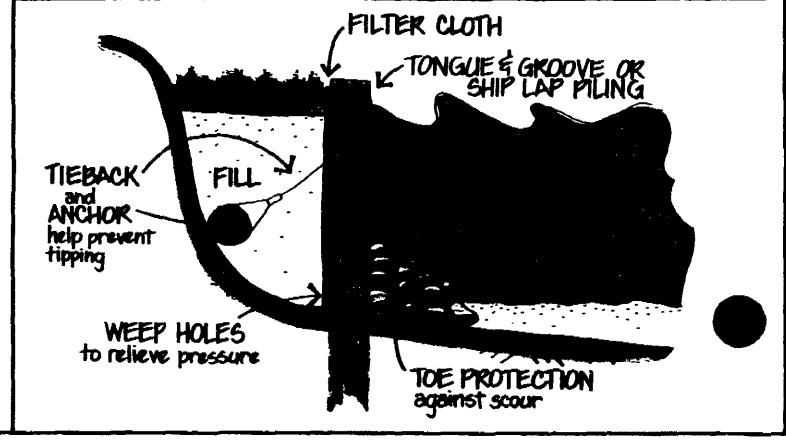


While bulkheads protect the land behind them, they may actually increase erosion of material at their base. Wave action is directed downward to where the wall meets the sand or earth, subjecting it to a greater force than if there were no wall. Since the bulkhead serves as a retaining wall, it does not aid in the accumulation of shoreline. Bulkheads and seawalls should be considered where boating and fishing are the primary activity. Where gently sloping beaches are required for sunning and swimming, breakwaters and groins should be considered.

Bulkheads and seawalls must be protected from water action, both in front of, and behind the structures. The downward force of waves breaking on the wall can cause scouring of the toe, eventually undermining the structure. Adequate protection must be provided to deflect wave energy and prevent scour.

The structures must be constructed high enough to prevent normal sea waves from passing over the top and eroding the material behind. Provisions must also be provided to allow ground water to pass through the wall, thus reducing excessive soil pressure which could tip the wall over. Regularly spaced weep holes equipped with filters will relieve this pressure.

Solid construction is necessary to prevent soil from washing through the wall. Tongue and grove or ship lap sheet piling, or a filter cloth placed between the wall and backfill should be employed. Precautions must also be taken to prevent erosion at the ends of the structure. It should cover the entire area subject to erosion and be firmly anchored to the bluff with wing walls or returns to resist flank erosion.

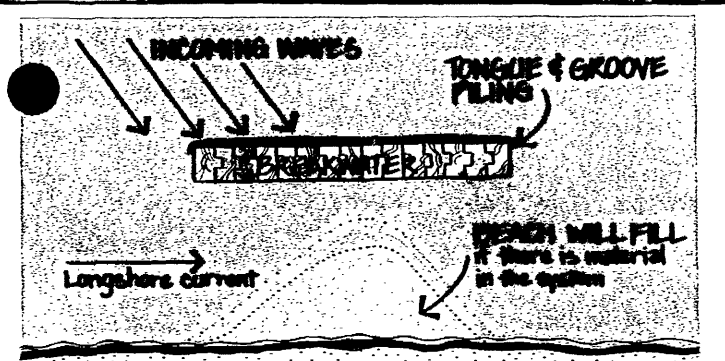


Breakwaters

Breakwaters are structures which are installed offshore to reduce the energy of incoming waves.

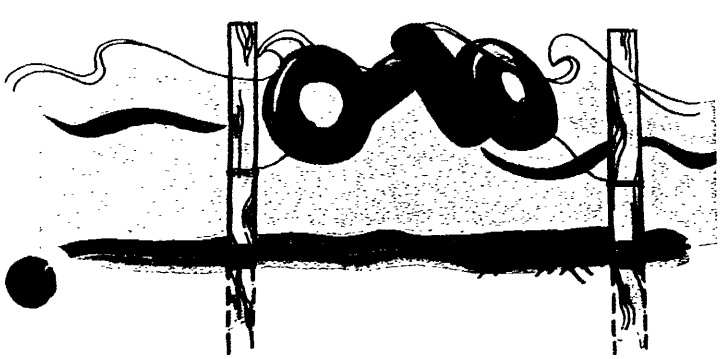
They are typically placed in shallow water 100 - 300 feet offshore and are designed to protect a gently sloping beach. When properly constructed, additional beach fill will accumulate behind the breakwater.

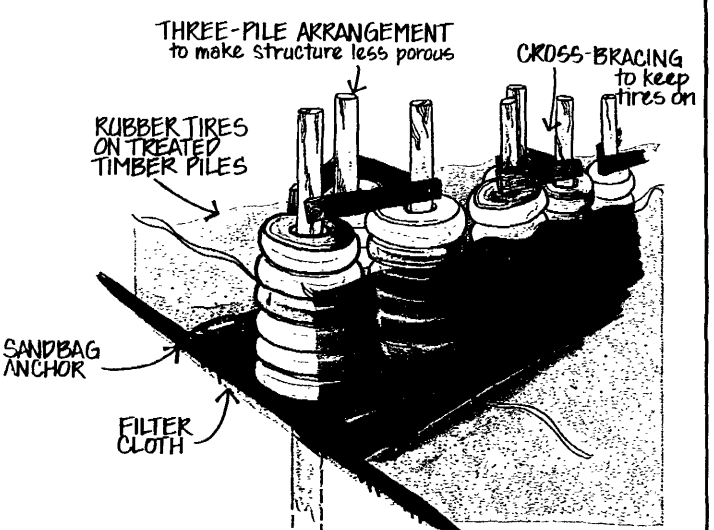
Fixed breakwaters can be constructed of rubber tires on treated timber piles, or treated sheet piling, where bottom conditions will allow for driving or jetting of piles to a sufficient depth. Since the breakwater will be subject to scouring (erosion at the base or "toe" of the structure), toe protection should be provided. Without this protection the bottom may wash away, causing the structure to tip.



OVERHEAD VIEW

TOO POROUS - NOT ENOUGH WAVE ENERGY ABSORBED





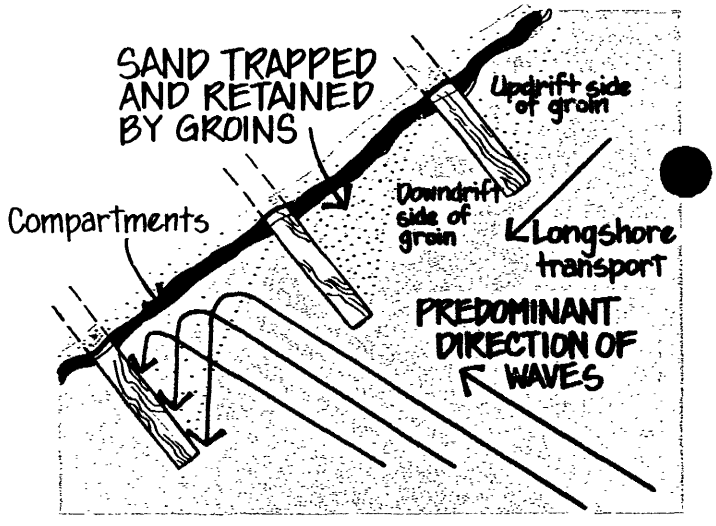
Groins

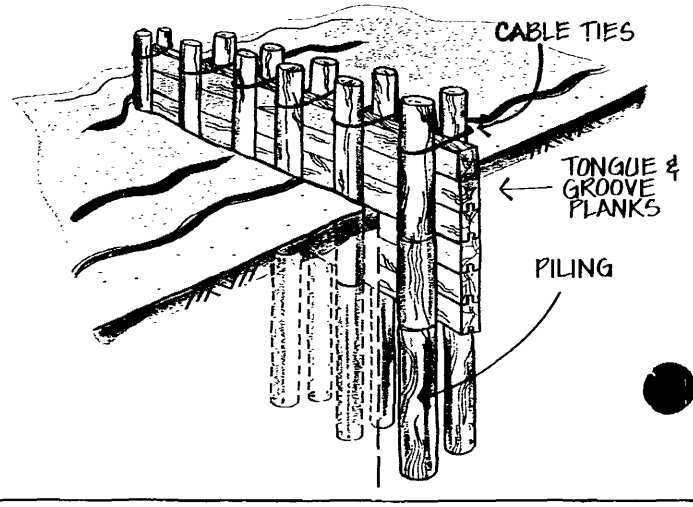
Groins are structures which extend into the water perpendicular to the shoreline.

They are typically constructed in groups to aid in the accumulation of sand between compartments. Groins are most effective where the longshore transport of material is predominately in the same direction.

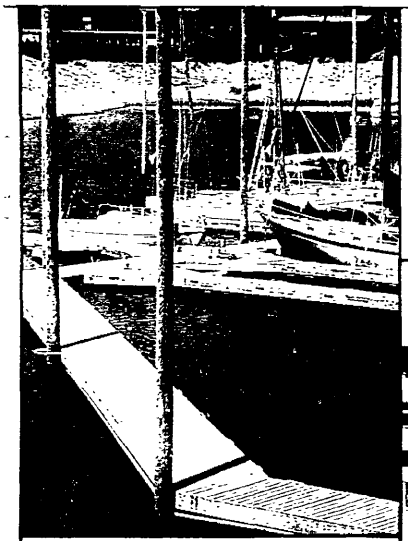
Several factors must be considered when constructing groin fields: height, spacing, extension (both shoreward and into the water) and porosity. The structures should be no higher than the normal beach, so that once filled, additional sand may pass onto the adjacent beaches. Spacing is related to groin length, wave energy and degree of latoral shift of material. Sand should accumulate along the entire length of the compartment. If the groins are too close, accumulation will be limited; too far apart, and part of the compartment will be left unprotected. As a starting point, groins should be spaced two to three times their length.

Groins should be built far enough into the water to accumulate sand, yet not long enough to cause rip tides along their end or cause erosion down beach. They must also extend far enough inland that storm waves cannot wash out the beach behind them and undermine the structure. Toe protection should be provided where the groin is subject to heavy wave action.

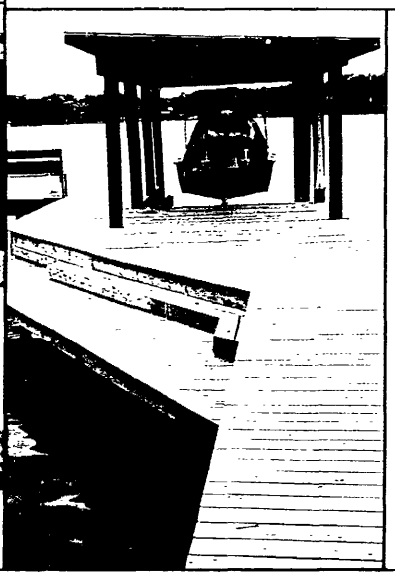




Docks And Piers

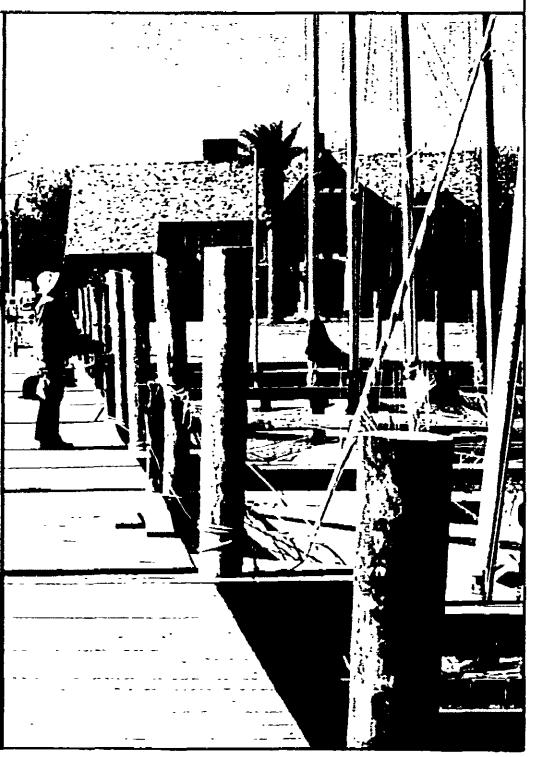


Docks and piers provide access for boating, fishing and swimming by means of a deck floating on or raised above the water.



When constructed on waterfronts with changing water lines caused by tides, boat docks should be built to provide access at all water levels. This can be accomplished with a floating section connected to a stationary walkway, or with steps which extend below the mean low tide level.

The walkway should extend up the beach to a point above the mean high tide line. This will ensure that wave action does not erode the beach at the walkway's starting point. The walkway and fixed dock should be secured to firmly anchored piles to resist lateral shift. Floating structures can be tethered to fixed structures, or allowed to float vertically along piles protruding through the structure.



The Right Treatment For The Job

For wood to perform satisfactorily in the marine environment, it must be protected from wood boring organisms.

One of the most effective means of combating this damage is to pressure treat the wood with Osmose K-33® preservative. Osmose K-33 preservative forms a permanent bond with the wood fibers. It will not leach out and lose its effectiveness. It will not pollute the soil or water, harm fish and plant life or rub off on skin and clothing.

SPECIFICATIONS

To ensure adequate service life, all lumber, timbers and piling placed in contact with salt water shall be treated to a retention of 2.5 pcf with Osmose K-33 preservative. Lumber subject to salt water spray, such as dock decking, should be treated to a retention of 0.60 pcf with Osmose K-33 preservative. Lumber to be installed in brackish water shall be treated to a retention of 1.0 pcf with Osmose K-33 preservative. These are minimum retentions established by the American Wood-Preservers' Association (AWPA), and required by Federal Specification TT-W-571J.

AWPA
STANDARD RETENTIONS

Application	Retention*	Typical Uses
Soil or Fresh Water Contact (Non-Structural)	0.40	Posts, Landscape Timbers, Grape Stakes, Retaining Walls
Soil or Fresh Water Contact (Structural)	0.60	Wood Foundations, Building Poles
Piles # Soil or Fresh Water Contact (Structural)	0.80	Foundation Piles
Salt Water Contact	2.5	Timbers, Pilings, Bulkheads

*Pounds per cubic foot. Minimum retentions conform to standards of the American Wood Preservers Association

OSMOSE® WOOD PRESERVING DIVISION

980 Ellicott Street
Buffalo, New York 14209
(716) 882-5905

P.O. Drawer O
Griffin, Georgia 30224-0249
(404) 228-84340

OSMOSE® pressure treated wood

Retention Guidelines

.25

ABOVE GROUND USES:

- Decking boards
- Fenceboards
- Plates
- Sills
- Stadium seating
- Railings
- Joists
- Headers
- Furring strips

.40

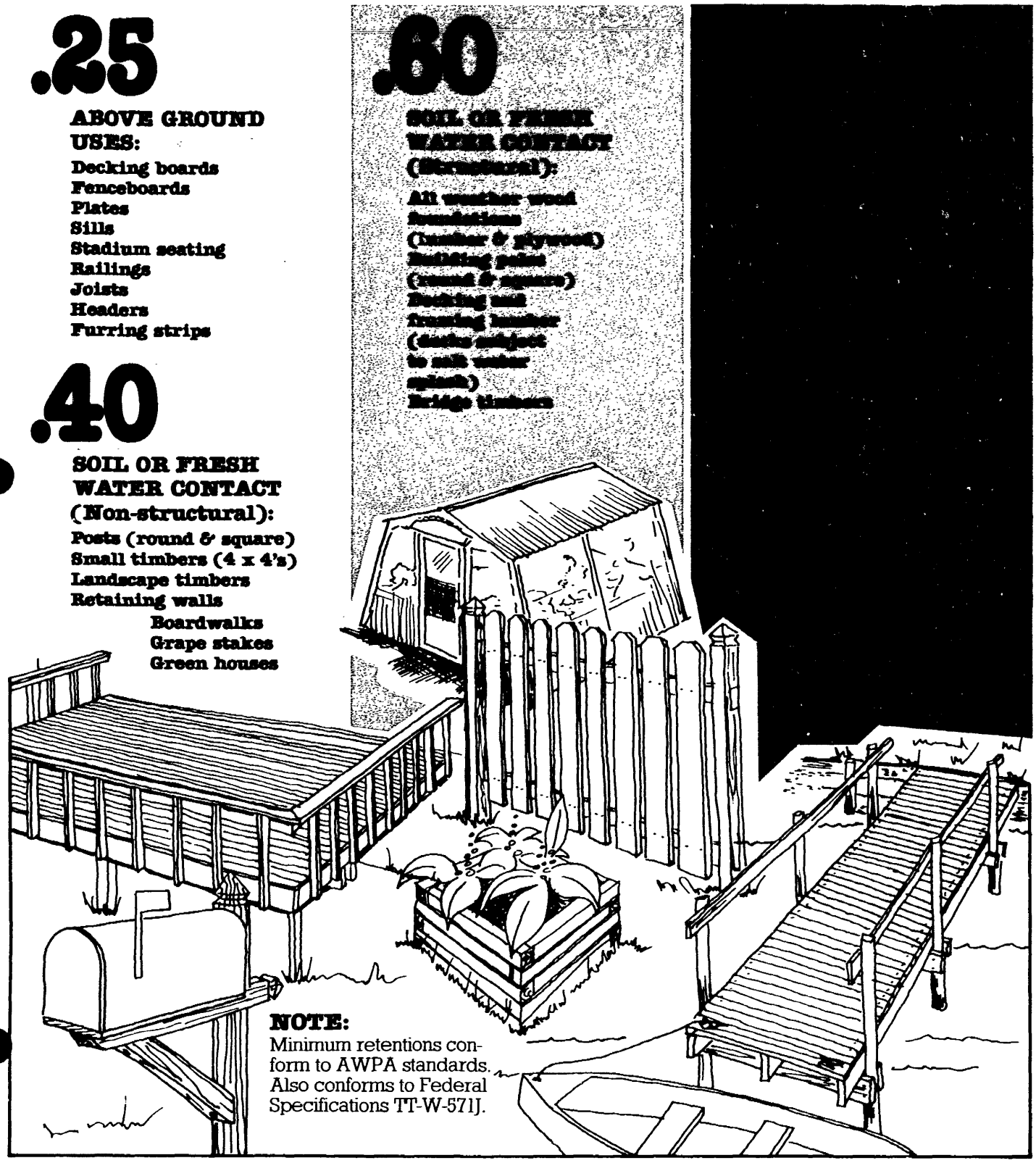
SOIL OR FRESH WATER CONTACT (Non-structural):

- Posts (round & square)
- Small timbers (4 x 4's)
- Landscape timbers
- Retaining walls
- Boardwalks
- Grape stakes
- Green houses

.60

SOIL OR FRESH WATER CONTACT (Structural):

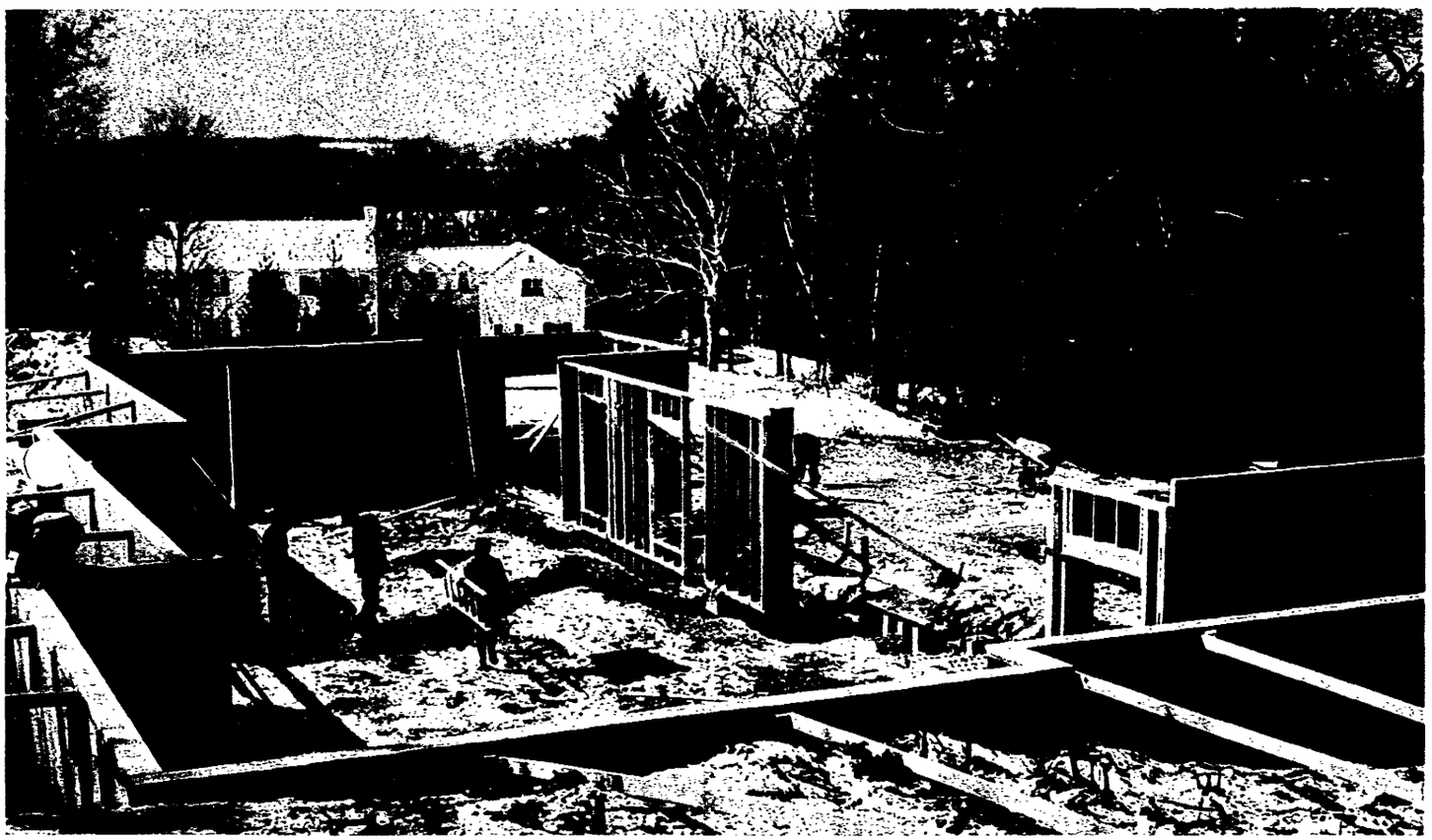
- All weather wood foundations (lumber & plywood)
- Building poles (round & square)
- Decking and framing lumber (decking subject to salt water splash)
- Bridge timbers

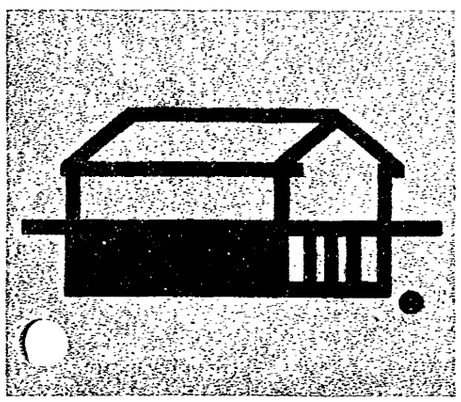


NOTE:
Minimum retentions conform to AWPA standards. Also conforms to Federal Specifications TT-W-571J.

OSMOSE®

THE ALL WEATHER WOOD FOUNDATION



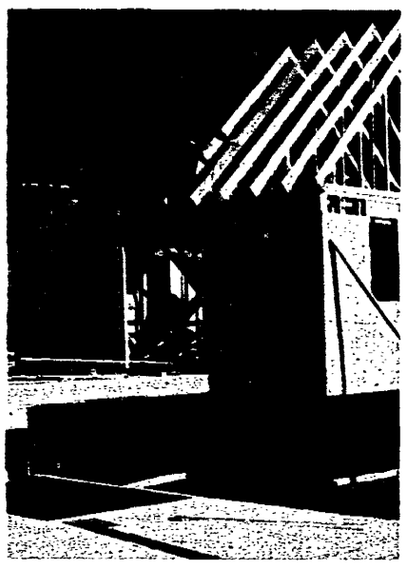


Time saving and value added . . . in virtually any weather . . . by the same crew that builds the rest of the house!

Osmose . . . innovators in the field of wood preserving with Osmose K-33 pressure preservative treatment, again leads the way in wood preservation for the ALL WEATHER WOOD FOUNDATION, the greatest advance in home building to both builder and buyer to come along in years.

THE AWWF SYSTEM

Based on sound and practical construction methods that have been proven through the years, the ALL WEATHER WOOD FOUNDATION is much more than a wood basement. But because it represents somewhat of a change from what we have grown to think of in terms of a "traditional" foundation, the concept



sometimes, causes a pause for a "second-look". This folder will outline many of the dramatic benefits of the ALL WEATHER WOOD FOUNDATION beginning with a description of the principle component: wood — Osmose K-33 Pressure Preservative Treated Wood.

From Noah's building of the Ark, through pioneer settlements the world-over, to today's functional and practical construction methods, wood has played a predominate role.

Wood offers strength, flexibility and availability unknown to any other building material. However, as nature has given us the beauty and benefits of wood, so also there are natural enemies that can cause wood failures. Each year thousands of standing trees fall to destruction from insect and fungus attack. Lumber, posts, poles and plywood can also be riddled by decay and insects.

Four elements need be present to attract and sustain wood damage created by termites and decay. They are: moisture, favorable temperature, air and a food supply. If one of these four can be eliminated, wood can last for hundreds of years. The Osmose K-33 Pressure Preservative System does just that by making the cellulose food source unpalatable and impervious to attack by termites and decay causing organisms.

The combination of woods' characteristic strength and resilience and the Osmose Preservative System creates a superior building material that is the heart of the ALL WEATHER WOOD FOUNDATION.

Osmose has played an important role in perfecting the ALL WEATHER WOOD FOUNDATION. Working in concert with the National Forest Products Association, the Society of American Wood Preservers, the American Plywood Association and others, Osmose has helped establish strict building specifications and codes that make the ALL WEATHER WOOD FOUNDATION the fastest growing building innovation in years. Today, well over 30,000 homeowners are enjoying the additional living space, warmth and economy the ALL WEATHER WOOD FOUNDATION delivers.

"... our sales department has found that once customers see and understand the wood foundation, that is the system they demand. It is far more saleable than a masonry foundation."

Charles F. Bull, Vice President
Neitzel Construction, Limited
Onalaska, Wisconsin

"An AWWF basement is warmer (Montana Power agrees) and easier to finish. Many of our buyers like to do the finishing themselves. It saves them money and gives them a chance to use their imaginations — like the man who used old barn wood for a rustic effect."

Robert E. Mace, President
Malit Construction, Incorporated
Laurel, Montana

BUYER BENEFITS

As a prospective new-home owner, there are many reasons to consider an AWWF.

One of the most important is that you won't have to suffer with another damp & musty basement. Instead you'll actually have extra usable space, another floor for comfortable living. Your AWWF basement will be dry, with high ceilings, no cracks, and no leaks.

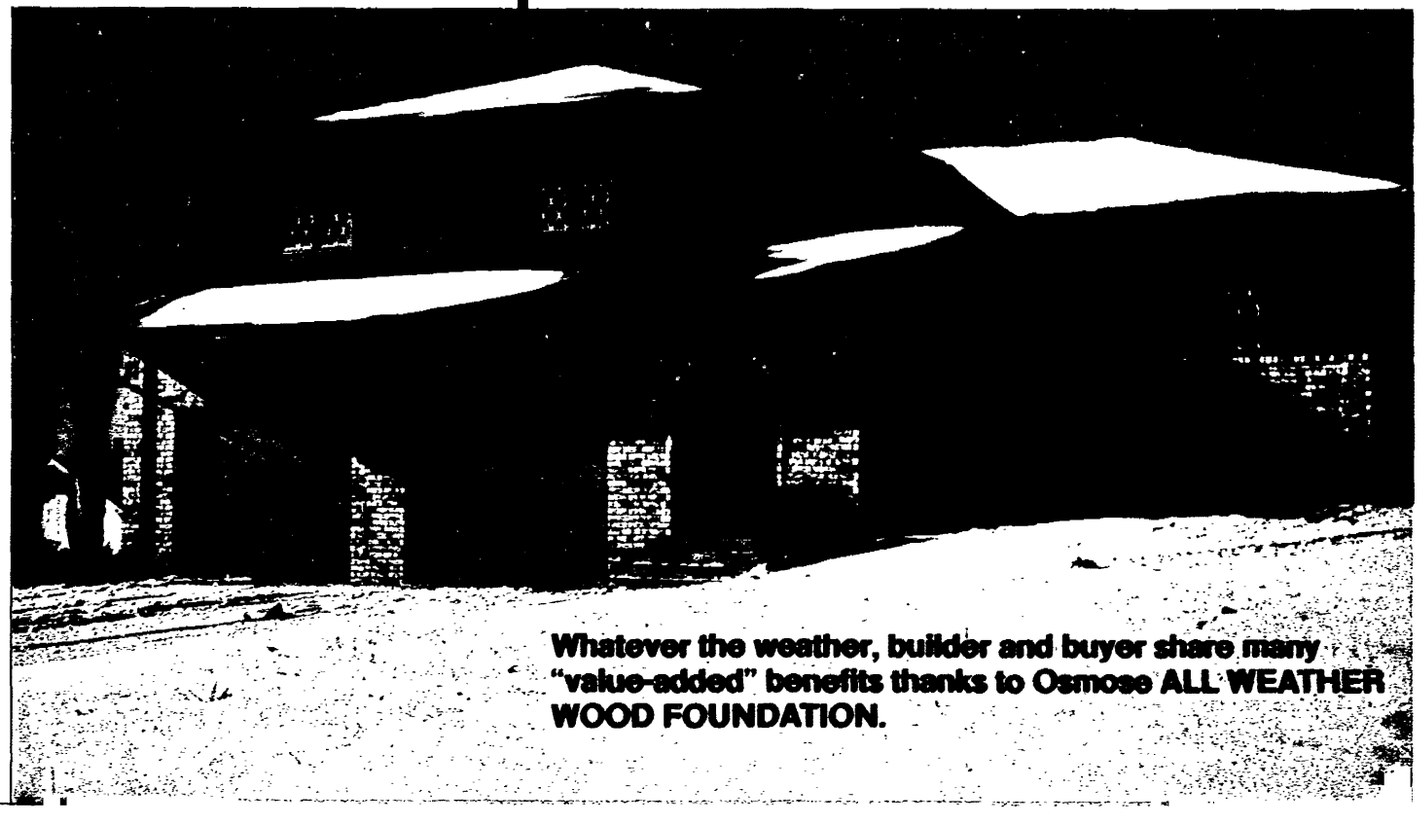
Your AWWF basement will be warm, too, because of wood's low rate of thermal conductivity. As W. L. Griebeler, homeowner in Port Townsend, Washington, said: "I initially had no heat in my AWWF basement. Yet I've never had exposed pipes freeze, even when we had 24 days in a row with below freezing temperatures. There's a definite feeling of warmth when I'm down there working. Of course it doesn't leak. I don't know how it could."

The AWWF is designed with a unique gravel fill and sump system that provides an effective drainage path. John Clifford, builder of one of the pioneer AWWF projects in the United States, recounts an incident that demonstrates just how well this drainage method works. In the Lexington Park project area, a record rainfall of over 12 inches fell in a 24-hour period as a result of hurricane Camille. "It was one of the heaviest rains that has ever fallen in the area." says Mr. Clifford. "During this time the AWWF houses were occupied and the families lived comfortably. There were no problems with leaky basements," though some conventional basements in the area were completely flooded.

And your AWWF basement is easy to finish! Plumbing and electric services located in the stud wall make insulation and finishing a simple project — no need for furring strips. And the insulation will save on your heating bills!

Today, saving energy is important to everyone. Your AWWF basement helps you to conserve energy and cut your heating bills two ways. It will stay warmer than a conventional basement because of wood's low rate of thermal conductivity. And since the AWWF basement is so easy to insulate and finish, the insulation you install will make your basement twice as economical!

Warm, dry, comfortable, easy to finish, economical — the AWWF has a lot to offer YOU!



Whatever the weather, builder and buyer share many "value-added" benefits thanks to Osmose ALL WEATHER WOOD FOUNDATION.

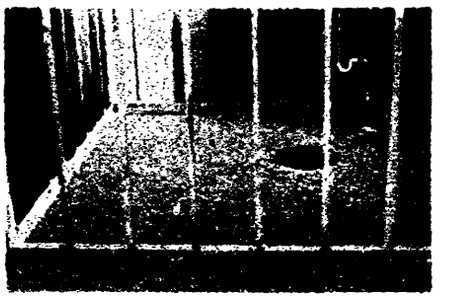
"I like the AWWF because all the work through completion of framing can be done by the contractor's own carpenter. Because we don't have to worry about scheduling a mason, or wonder if masonry material will be delivered on time, our own scheduling and layout is simpler."

Kenneth P. Martin, Contractor
Charlottesville, Virginia

"The AWWF allows us to construct homes during all seasons, even when Montana winter temperatures are 20° below zero. Our modular homes with full AWWF basements cost the customer $2 to $3 per square foot less than conventional construction in the area."

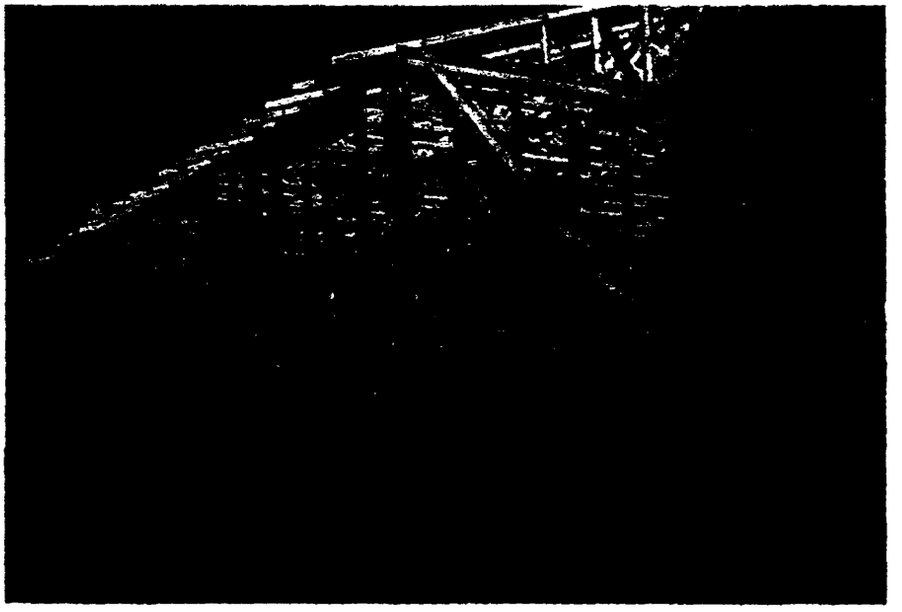
Donald O. Mullen
Housing Incorporated
Miles City, Montana

In addition to all this, the AWWF is adaptable to almost any site or building configuration, and can meet specific requirements of different soils. And it's more saleable. Charles F. Bull, Vice President of Neitzel Construction, said: "Our sales department has found that once customers understand the wood foundation, that is the system they demand. It is far more saleable than a masonry foundation."



And perhaps most important, the AWWF is the vanguard of the methods of the future. As Ed Starostovic, Vice President of Product Fabrication Service, said: "I have an AWWF home. The foundation has no cracks, is drier, and is less expensive to wire and finish. There is no way that I would ever, voluntarily, put in a concrete foundation again. The AWWF is to foundations what gypsumboard is to plaster."

The AWWF has been extensively tested for more than a decade. Thousands of AWWF homes are now in use around the country. The system is engineered for strength. AWWF basement walls don't crack or leak, which means basements are dry and livable. And they are durable. The long life of pressure-treated wood below grade has been demonstrated time and again over the years by railroads, public utilities and marine installations. The U. S. Department of Agriculture, after 40 years of testing treated wood for durability, predicts a service life well beyond 100 years.[1]



AWWF is approved by the four major model building codes:

ICBO — International Conference of Building Officials
BOCA — Building Officials & Code Administrators International
SBCC — Southern Building Code Congress
NBC — National Building Code, American Insurance Association

and is approved for mortgage insurance by:

HUD. Minimum Property Standards
Federal Housing Administration
Veterans Administration
Farmers Home Administration
The Mortgage Insurance Corporation
Federal National Mortgage Association
Federal Home Loan Mortgage Corporation
The U.S. League of Savings & Loan Association

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Ed Starostovic, P.E., Vice President
Product Fabrication Service
Madison, Wisconsin

"The AWWF is strong. It has warmth. The last one built — mine — saved $300 to $400 over the cost of concrete block or poured concrete walls."

Dick Wolfe, Builder and
Sales Manager
Kingswood Lumber Company
Columbus, Ohio

BUILDER BENEFITS

As a home builder, you can derive countless benefits from working with the AWWF!

First of all, you can enjoy a longer building season because the AWWF can be constructed in any weather.

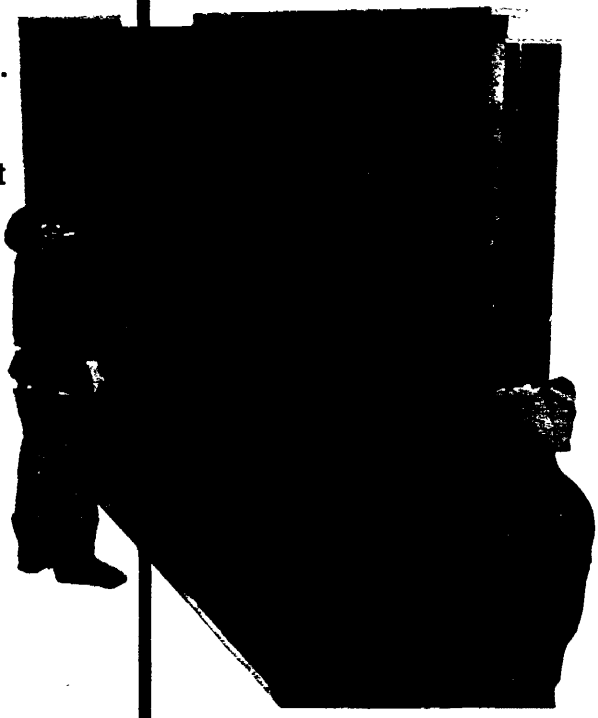
You don't have to wait for masonry or concrete to cure, for the rain to stop, or for the ground to thaw.

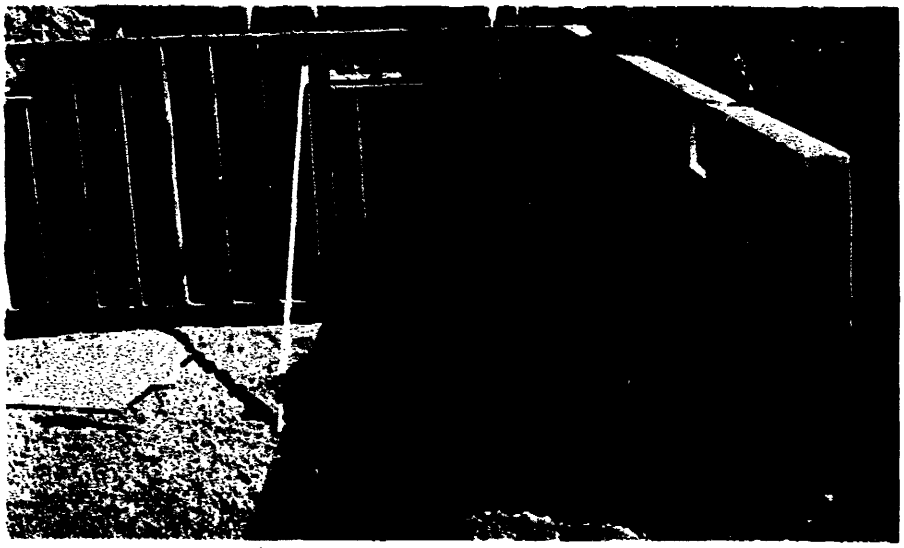
Robert E. Bergquist, Vice President of Citation Homes, said "We proved it could be done on a day in January when the wind-chill factor was −40° and the depth of frozen ground was 3 to 4 feet."

And imagine how great it will be to be able to stay on schedule. No weather delays, no delays waiting for sub-contractors and their materials, and fewer man-hours required for construction all adds up to an efficient, economical work schedule.

You can also benefit from being able to install more foundations per year. Installation takes about ⅛ the time of conventional foundations, and can be installed year round. And the AWWF can be pre-fabricated to reduce on-site time, so you can build 6-8 times as many AWWFs in one year as masonry foundations.

In many areas, an AWWF can save several hundred dollars over the cost of a conventional masonry foundation. More importantly the stress-skin construction principles affords greater resistance to sudden changes in both lateral and the vertical loads; gives the foundation greater flexibility in meeting sudden changes in fluid soil pressure and impact loadings. An AWWF can re-distribute an increased vertical load along the entire length of the wall, rather than merely transferring it to one point which would cause settling and cracking.

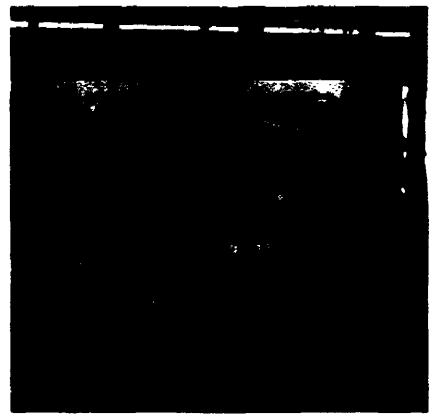




OSMOSE & EXCELLENCE — SINCE 1934

With over 45 years of experience in water-borne preservation, Osmose is a leader in the research and development of wood preservatives and wood treating methods. Osmose preservatives are impregnated in wood by an accurately controlled vacuum-pressure operation which forces the preservatives deep into the cellular fibers thus changing the characteristics of wood so it is highly resistant to attacks from rot, decay and insects. Newly installed treating facilities are automated to operate from a remote control center at the push of a button.

Distribution of Osmose treated products is made by Osmose licensed treating plants who offer local availability of pressure treated wood with fast, dependable service and technical assistance on proper specifications and applications. Lumber and plywood pressure treated at each Osmose plant adheres to the rigid quality requirements set by the American Wood Preservers Association standards. All lumber and plywood for the AWWF must be pressure treated, inspected and stamped in accordance with the strict standards of the American Wood Preservers Bureau. A clean, non-leachable preservative must be used, such as Osmose K-33. For value-added permanence and protection, specify OSMOSE K-33 treated lumber, plywood, posts, poles, timbers and dimensional stock.



AUTHORIZED PRODUCERS:

OSMOSE

For additional information, please contact:
OSMOSE WOOD PRESERVING CO. OF AMERICA, INC.
980 Ellicott Street, Buffalo, New York 14209/716-882-5905

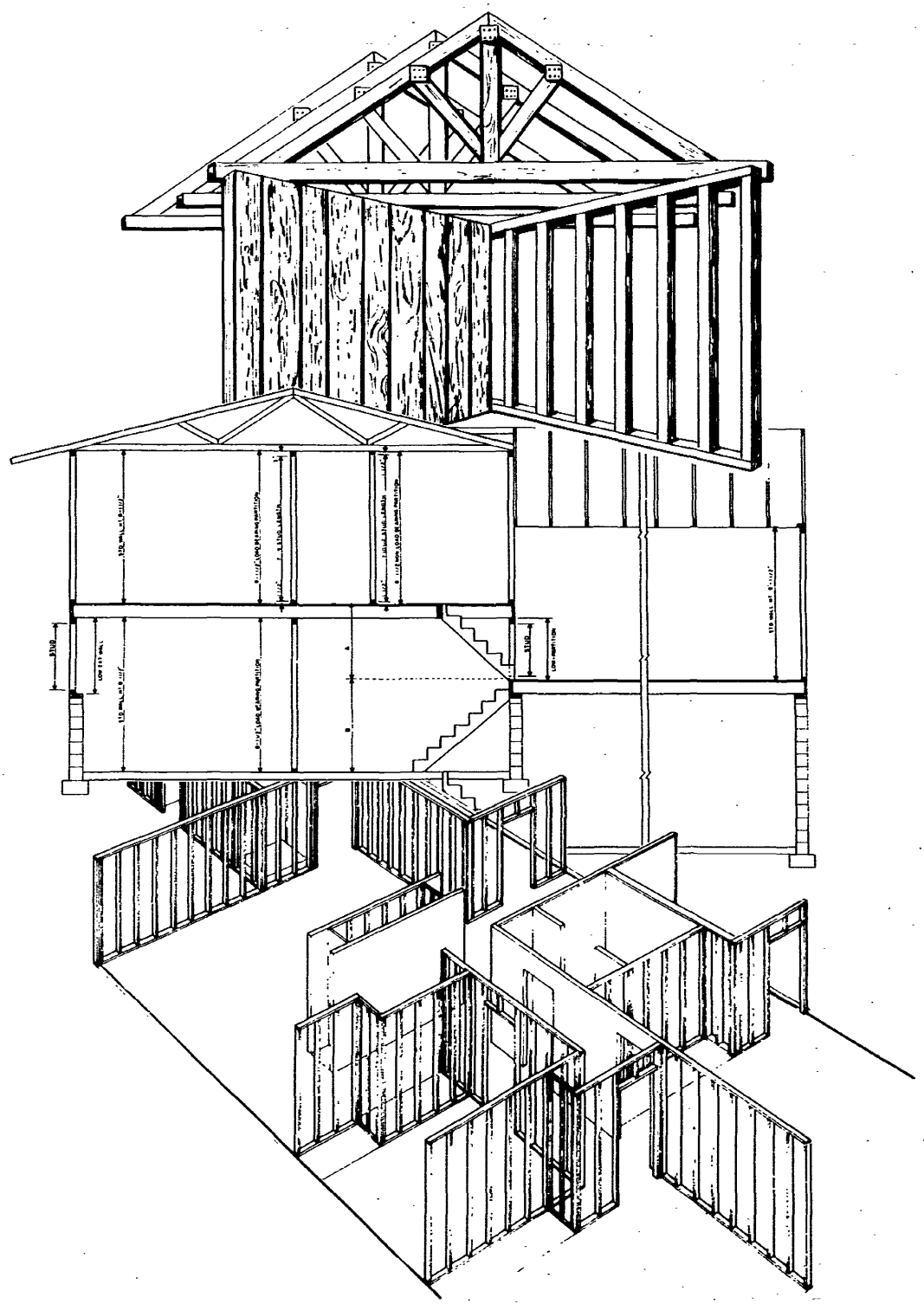
[1]Osmose gratefully acknowledges the American Plywood Association for research and testimonial data, references, quotations and some photographs appearing in this brochure.

Printed in U.S.A.
B5-4/83

COSMOSE

DOCU-SPEX™

Interior Fire Retardant Treated Wood Products



DOCU-SPEX™

Sample Specification For Interior Fire Retardant Treated Wood Products

The following paragraphs may be included by the specifier in Sections 06100 Rough Carpentry or 06300 Wood Treatment for Fire Retardance, in order to specify Flame Proof® LHC™ fire retardant treated wood products from Osmose. Paragraphs follow the CSI three part format.

PART 1 — GENERAL

1.01 WORK INCLUDED

A. Fire retardant pressure treatment of wood members for reduced flame spread in interior applications (see note 1).

1.02 QUALITY ASSURANCE

A. Wood treated shall conform to AWPA Standards for a flame spread rating of 25 or less when tested in accordance with one of the following test methods: ASTM E—84, UL723, NFPA 255.

B. Each piece shall bear the mark of Underwriters Laboratories, Inc., indicating conformance to Section 1.02 A.

C. Manufacturer shall submit written certification to general contractor prior to installation or fabrication of treated wood members that all wood specified to be fire retardant was treated and handled at manufacturers plant, and shipped from it in accordance with standards herein. Certification shall clearly identify project and uses of wood receiving treatment.

1.03 PRODUCT HANDLING

A. Manufacturer shall conform to AWPA M4 "Standard for the care of pressure treated wood products."

B. Fabricator shall take particular care to keep treated members dry at all times, storing it off ground, or protected by unbroken water tight covering. Keep ventilated to avoid moisture condensation.

1.04 COORDINATION

A. Seasoning—Manufacturer shall dry all wood after treatment to a maximum moisture content of 19% for lumber, 15% for plywood.

B. Architect has designed all fire retardant members at a 10% reduction in working stresses as listed by the National Design Specifications for Wood Construction.

C. Architect has designed all systems in which fire-retardant members are used to be protected from weather and exposure to moisture condensation in accordance with manufacturers recommendations. Fabricator will insure that during erection all fire retardant material is protected from moisture and that fire retardant material is not used except in protected interior applications. (See Note 2)

1.05 REFERENCES

A. Standards referenced are as follows:
American Society For Testing and Materials E—84
American Wood-Preservers' Association C—20
American Wood-Preservers' Association C—27
American Wood-Preservers' Association M—4
National Fire Protection Association 255
National Design Specifications for Wood Construction
(National Forest Products Association 1982)
Underwriters Laboratories, Inc., 723

PART 2 — PRODUCTS

2.01 APPROVED FIRE RETARDANT SYSTEM

A. All wooden members to be fire retardant treated shall be pressure impregnated with sulfate and halogen free chemicals and certified to be low in hygroscopicity.

B. "Flame Proof LHC" from Osmose is approved as conforming to Section 2.01 A.

C. Acceptable manufacturers are fully licensed and authorized producers of Flame Proof LHC by the Osmose Wood Preserving Co. of America, Inc.

2.02 WOOD RECEIVING FIRE RETARDANT TREATMENT

A. Treat all wood for the fabrication of the following items used in this project:
Insert members to be treated (See Note 1)

PART 3 — EXECUTION

3.01 INSPECTION

A. Wood members treated for fire retardance shall be visually inspected for identifying mark of Underwriters Laboratories, Inc. in accordance with Section 1.02 B.

3.02 FABRICATION

A. Care shall be exercised in making all cuts in wood prior to treatment to insure maximum fire retardant properties. Necessary field end cuts with no further treatment are acceptable. (See Note 3)

3.03 CONSTRUCTION PRACTICES

A. Care shall be exercised to use commonly accepted good construction practices for the construction of all wooden member assemblies.

Notes to the Specifier:

1. It is suggested that this specification be used for roof decks and their supporting members (beams, joists, rafters, purlins, collar ties and trusses, mansard framing, etc.); studs, blocking, bucks, nailers, and interior paneling and trim.
2. Wood that is to be finished must be dry. A light sanding is suggested to clean off the surface prior to applying finish. Any oil based surface coating may be applied without affecting the Flame Proof LHC treated wood where normal humidity levels are expected. Coating manufacturers recommendations must be followed. Water-based paints are not to be used.
3. Carbide tipped tools should be used for all cutting or machining. Fire retardant treated wood is abrasive to regular steel tools. Southern Pine lumber can be machined after treatment ¼" on each side and still maintain a UL label, provided ¼" penetration of fire retardant chemicals remains.
4. In general, fire retardant treated wood may be glued. Water based adhesives are **not** allowed. For specific glueing recommendations please contact the treating plant.
5. The Underwriters Laboratories listed lumber species are: Southern Pine, Douglas Fir, Hemlock/White Fir, SPF (Spruce/Pine/Fir), Ponderosa Pine, White Pine, Red Pine; and for plywood species Douglas Fir and Southern Pine.
6. Flame Proof LHC is qualified under military specification MIL-L-19140C for use by all departments and agencies of the United States Department of Defense.

Flame Proof® LHC

Product Presentation

FLAME PROOF®LHC™ is a special formulation of fire retardant chemicals for the pressure treatment of lumber, plywood and other wood products. FLAME PROOF LHC fire retardant treated wood meets Underwriters' Laboratories classification and labeling requirements for a flame spread rating of not greater than 25 in tests of 30 minutes duration. FLAME PROOF LHC is a sulfate and chloride free formulation which significantly limits corrosion of metal fasteners and reduces hygroscopicity values to levels similar to untreated wood even under exposure conditions with relative humidities as high as 95%. The FLAME PROOF LHC fire retardant formulation eliminates surface blooming of fire retardant chemicals. These performance characteristics of FLAME PROOF LHC fire retardant treated wood are superior to the properties of conventional interior fire retardants.

FLAME PROOF LHC fire retardant treated wood retards the spread of flame and provides protection to wood frame construction. It is self-extinguishing, which eliminates wood as a fuel source, and limits the spread of fire. FLAME PROOF LHC treated material normally maintains its strength longer than many building materials under similar fire conditions. It provides an extra margin for life safety and helps prevent extensive fire damage.

Uses and Applications

FLAME PROOF LHC with its ability to withstand fire, its low hygroscopicity and compatibility with metal fasteners, makes it an ideal product for most interior building applications where fire hazards must be minimized. FLAME PROOF LHC treated wood can be used in interior environments, not subject to direct weather exposure, where the humidity is not expected to exceed 95% for prolonged periods. In addition, FLAME PROOF LHC treated wood should not be specified for use under conditions which fasteners or untreated wood would not be expected to give maximum performance. Examples of these conditions would include wet process industries, corrosive atmospheres such as coastal areas subjected to direct or indirect salt spray or manufacturing sites subjected to corrosive chemical fumes, or moisture content conditions that would lead to biological deterioration of wood that had not been preservative treated.

FLAME PROOF LHC can be used for roof and floor trusses, beams, interior roof decks, architectural millwork, trim, paneling, interior load bearing and nonload bearing partitions in homes, apartments, commercial, industrial and institutional buildings.

Permanance
FLAME PROOF LHC treated wood will maintain its fire retardant properties for the life of the structure when properly specified and installed. In addition, FLAME PROOF LHC treated material must be protected from adverse weather conditions during transit, storage and erection.

Strength
FLAME PROOF LHC fire retardant treated wood should be considered approximately 90% as strong as untreated lumber when designing in accordance with NFPA "National Design Specification for Stress Grade Lumber and Its Fastenings."

Drying
Osmose requires that FLAME PROOF LHC fire retardant treated wood be kiln dried to a moisture content of 19% of less for lumber and 15% or less for plywood before use.

Workability
Treated lumber tends to dull cutting knives; therefore, carbide tipped tools are recommended if cutting, machining or framing is necessary after treatment. Resurfacing or ripping (other than ordinary end cutting) may negate the Underwriters Laboratories label. Southern Pine may be machined after treatment and maintain the Underwriters Laboratories certifications. Other species should be machined before treating. For further information contact your local supplier.

Decorating and Finishing
Surfaces to be stained or painted must be dry and should be lightly sanded or wire brushed to clean the wood surface. Stains should be applied as per manufacturer's recommendations. Only oil based finishes should be used on FLAME PROOF LHC treated wood.

Availability, Cost
The cost of FLAME PROOF LHC treated lumber and plywood varies according to species, grade, quantity and geographic locations. FLAME PROOF LHC treated wood is available from a broad network of Osmose treating plants and lumber distributors throughout the United States.

Blooming
FLAME PROOF LHC treated material will not develop unsightly surface bloom which is common with conventional interior fire retardants. The lack of blooming is related directly to reduced hygroscopicity. There are no residues to detract from the natural beauty of wood. Treated wood will remain clean, making it easy to apply paints or stains. Additionally, FLAME PROOF LHC treated wood is ideally suited for interior exposed millwork, molding and paneling applications. By eliminating corrosive surface residues caused by blooming, FLAME PROOF LHC is significantly less corrosive and is compatible with metal fasteners when used in interior applications.

Hygroscopicity
FLAME PROOF LHC treated wood, properly kiln dried after treatment, is significantly less hygroscopic than conventional interior fire retardants, and only slightly more hygroscopic than untreated wood. FLAME PROOF LHC treated wood can be specified for interior applications with relative humidities less than 95%. The hygroscopicity of FLAME PROOF LHC treated wood is minimal, making paintability easy and use of metal fasteners virtually trouble free. Conventional interior fire retardants have limited applications under conditions of prolonged exposure to very high humidities. However, conditions of continuous exposure to high relative humidities in special industrial environments or buildings such as swimming pools should be carefully evaluated with regard to the exposure before specifying FLAME PROOF LHC fire retardant treated wood.

Fasteners
FLAME PROOF LHC is not significantly corrosive to metal fasteners in interior applications where the relative humidity is not expected to exceed 95% for prolonged periods. Research has determined, by accelerated tests and field observations, that metal fasteners used with FLAME PROOF LHC in interior applications not exceeding 95% relative humidity, perform similarly to untreated wood used in like applications.

For specific applications of metal tubing, conduit, ductwork, sheathing, etc., proper construction practices should be observed to minimize moisture condensation and protect FLAME PROOF LHC from wetting. Some applications may require a vapor barrier or wrapping of metal materials. Please consult your local supplier.

Galvanized metal siding, when used in applications of less than 95% relative humidity, will perform satisfactorily where moisture condensation does not occur between the metal and the treated wood. Where condensation is a problem, such as in unheated warehouses or storage buildings, an asphalt or polyethylene vapor barrier should be installed between the metal and the FLAME PROOF LHC treated wood.

NOTE: Corrosion tests are based upon the required kiln drying of material after treatment to 19% moisture content.

Standards/Approvals
FLAME PROOF LHC is certified by Underwriters Laboratories, Inc. and has received approval certifying conformance with the requirements of Military Specification MIL-L-19140C. FLAME PROOF LHC is recognized and approved by the major model building codes and insurance rating bureaus.

"The most trusted name in wood preserving"

OSMOSE®

Eastern/Central Division
980 Ellicott Street
BUFFALO, NEW YORK 14209

Southern/Western Division
P.O. Drawer O, 1016 Everee Inn Road
GRIFFIN, GEORGIA 30224

Portions of the cover illustration used with permission from The National Forest Products Association

As seen in the March'84 issues of
ARCHITECTURAL RECORD and CONSTRUCTION SPECIFIER

ARCHITECTURAL SURFACES

FLAME PROOF LHC

fire retardant treated wood

Designers can now specify an interior fire retardant treated wood where the finishing of architectural surfaces is important. **FLAME PROOF® LHC™** pressure treated wood products will not develop unsightly surface chemical bloom, and its low hygroscopic and low corrosive properties make it ideally suited for exposed architectural applications. Common oil-based paints, stains, varnishes and sealers can be applied as easily to **FLAME PROOF LHC** treated wood as untreated wood.*

FLAME PROOF LHC is the only fire retardant of its type to offer designers a choice of both UL approved FR-S, and fire performance rated softwood *and* hardwood species. Additional product information on **FLAME PROOF LHC**, can be obtained by contacting the Osmose toll free Technical Line, 1-800-522-WOOD.

*Osmose recommends only oil-based finishes which should be applied according to finish manufacturer's specific recommendations, including allowable wood moisture content levels, and surface preparation procedures. Some wood species exhibit slight color changes when treated. Specific information on species availability and color change is available from Osmose.

Flame Proof LHC™

OSMOSE / Wood Preserving Division
P.O. Drawer O
Griffin, GA 30224-0249

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980 Ellicott St.
Buffalo, N.Y. 14209
716—882-5905

SOUTHERN OFFICE:
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Griffin, Ga. 30223
404—228-8434

Data Sheet F-2-74

OSMOSE FLAME PROOF®

FINISHING PROCEDURES FOR FLAME PROOF TREATED WOOD PRODUCTS

The following procedures have been found to be the most satisfactory method of finishing FLAME PROOF treated wood.

Treated lumber and plywood must be dried before application of stain, paint, or other finishes. It is recommended that the average moisture content be 15% or less for best results.

Surfaces to be stained should be lightly sanded to remove residue from the surface. Stains should be applied as per manufacturer's recommendations. A sealer coat, such as shellac, linseed alkyd or tung oil alkyd varnishes can then be applied in a thinned mixture, approximately one part sealer to one part thinner. When this coat is thoroughly dry, a second coat of non-diluted sealer should be applied. A third coat of sealer, although not required, is recommended to insure complete coverage of the surface finished. Painting shall be done as per manufacturer's recommendations after all residues are removed from the surface by sanding and one coat of unthinned shellac, linseed alkyd or tung oil alkyd varnish is applied. A second coat on non-diluted sealer is recommended to insure complete coverage before painting. If a whitish bloom occurs after application of sealer or paints, remove this by wiping with a damp cloth, then allow the moisture to dry and apply an additional coat of sealer or paint.

Water-based paints should not be used on fire retardant treated wood.

FLAME PROOF treated lumber and plywood, intended for decorative use, must be sealed on the edges; it is also recommended that such plywood be back-primed before installation. FLAME PROOF treated wood products are intended for interior use only.

OSMOSE 6 WOOD TREATMENT FIRE RETARDANT
1974

●Registered Trademark

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Griffin, Ga. 30223
404—228-8434

Data Sheet F-3-74

OSMOSE FLAME PROOF®

PROTECTION OF GALVANIZED HARDWARE USED ON FLAME PROOF TREATED WOOD

Osmose Flame Proof fire retardant treated lumber is not designed for exterior exposure and therefore, should not be used outdoors or left unprotected for long periods during storage or shipment. Occasionally, however, due to large size, odd shape or construction delays, FlameProof treated wood may be unavoidably exposed to the elements.

Under extremely wet conditions, it has been found that the zinc in the galvanized coating may corrode, resulting in an unsightly white coating. If this wet condition continues for any length of time, it is possible that the galvanizing would be completely removed, thus allowing the underlying steel surface to rust. When using galvanized hardware, especially for nailer or truss plates, it is advisable to protect the hardware from contact with the FlameProof treated wood which may be subject to wet conditions. Several methods of protection are available which have proven successful. One of these is a protected coating marketed as "Rust - Veto 342" produced by E. F. Houghton Company, 305 W. Lehigh Avenue, Philadelphia, Penna. 19133. This is a Cosmoline base product which is inexpensive and can be diluted 50-50 with a low boiling naptha solvent. The following methods of coating have been found to be advantageous:

PROCEDURES FOR APPLYING "RUST-VETO 342" TO TRUSS PLATES

NOTE: Standard procedures for handling volatile flammable liquids must be followed.

Dip Coating

1. Dilute the product 50-50 by volume with a low boiling solvent such as mineral spirits or paint thinner (not turpentine). Mix in a suitable size dip tank.

2. A jig on which a number of plates can hang may be used. Dip the plate into the solution. Remove and allow excess solution to drain back into the tank.

3. Allow the solvent to evaporate. This can be done by either hanging the plates on hooks or laying them on a flat surface with the prongs down.

Spraying or Painting After Fabrication

It may be more desirable to fabricate the trusses first and then apply the solution to the exposed metal surface. Use the following procedure:

1. Dilute the product as per dip coating above.

2. After fabrication of the truss structures, spray or brush the exposed metal surface liberally with the 50-50 solution.

3. Allow the solvent to evaporate as long as possible before storing in contact with another surface.

® Registered Trademark

PROPERTIES OF OSMOSE K-33
PRESSURE TREATED LANDSCAPE PRODUCTS

PERMANENCE

Osmose K-33 is suspended in water for pressure impregnation deep into the wood member. A chemical reaction then takes place between the wood fibers and the wood preserving chemicals which permanently locks the wood preservative in the treated member. This reaction renders the material leach resistant even under severe conditions of continuous wetting and drying or in direct contact with running water.

STRENGTH

Treatment with Osmose K-33 does not influence to any significant degree the strength properties of any timber.

ELECTRICAL CONDUCTIVITY

Tests show that Osmose K-33 treated wood has a higher electrical resistance than untreated wood (at the same moisture content). This is particularly significant in the field of electrical power transmission poles, etc.

FIRE RESISTANCE

Treatment with Osmose K-33 does not increase the flammability of timber and there are some indications that combustibility is reduced.

SAFETY IN USE

Although proven in laboratory, field trials and practice over many years to be highly toxic to wood destroying organisms, Osmose K-33 treated wood presents no health hazards to humans, animals or green plants.

GLUING

Osmose K-33 treated lumber is readily glued with quality adhesives. It is recommended that 4 to 8 hours prior to gluing the material be lightly dressed or sanded, and then brushed clean, and that the moisture content be within the glue manufacturer's recommendations.

DECORATING

Osmose K-33 needs no decoration, but if desired can be painted, stained, varnished etc., in the same manner as untreated wood provided care is taken to insure that moisture content is within the range recommended by paint manufacturers.

FIXINGS

Under normal conditions of use, Osmose K-33 treated wood is no more corrosive to metal fasteners than untreated lumber.

AVAILABILITY

Osmose K-33 Wood Preservative is available from a broad network of treating plants and lumber distributors throughout the United States.

HOME OFFICE:
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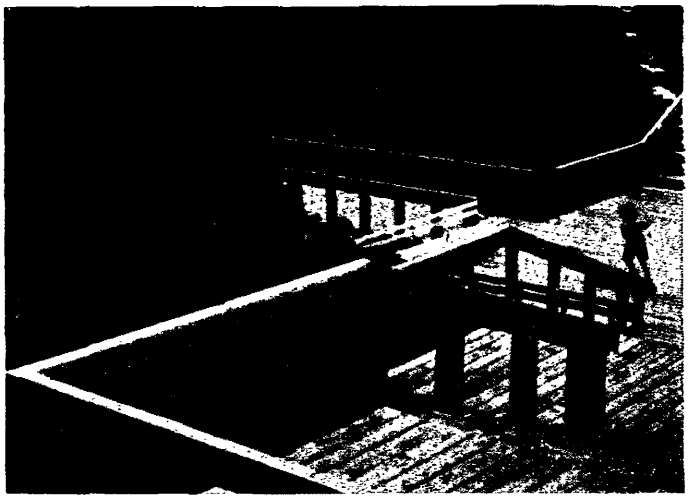
Data Sheet K-7-74

OSMOSE K-33®

PRESSURE TREATED LANDSCAPE PRODUCTS



James C. Scott Assoc., Architect
Bloomfield Hills, Mich.

APPLICATIONS:

- CURBS AND EDGINGS
- RETAINING WALLS
- PLANTERS
- BOARDWALKS
- STEPS AND RAILINGS
- BRIDGES
- DOCKS AND FLOATS
- STORAGE BUILDING
- SOUND BARRIERS
- FENCES
- DECKS AND PLATFORMS
- TABLES AND BENCHES
- PATIOS
- TRELLIS AND LATTICE WORK

ADVANTAGES:

- LOW IN-PLACE COST
- LONG, USEFUL SERVICE LIFE; NO MAINTENANCE
- ATTRACTIVE SILVERY GREEN COLOR
- DOES NOT HIDE NATURAL GRAIN PATTERN
- CAN BE PAINTED OR STAINED IF DESIRED
- CLEAN — ODOR FREE — NON STAINING
- SAFE FOR HUMANS, PLANTS, ANIMALS
- LIGHT WEIGHT; EASY TO HANDLE
- ECONOMICAL
- NON-CORROSIVE TO METAL FASTENINGS
- NO FIRE HAZARD
- ALL LENGTHS AND SIZES AVAILABLE; NO WASTE; EASY TO WORK

OSMOSE K-33® wood preservative is used throughout the world for protection of wood products from attack by insects and decay organisms. The chemicals are pressure impregnated deep into the structure of the wood member and are permanently attached to the wood fibers to insure long lasting service.

SPECIFICATIONS:

ALL (INSERT IN HERE THE EXACT MATERIALS TO BE TREATED) SHALL BE PRESSURE TREATED WITH OSMOSE K-33 PER THE AMERICAN WOOD PRESERVERS' ASSOCIATION STANDARD P5; RETENTIONS SHALL BE IN ACCORDANCE WITH THE A W P A STANDARDS C1, C2, C4 AND C9. TWO BRUSH COATS OF OSMOSE SPECIAL K-33 TREATING SOLUTION SHALL BE APPLIED TO ALL FIELD CUTS MADE AFTER TREATMENT ON HARD-TO-TREAT SPECIES.

® Registered Trademark

Designer. James C Scott. Associates. Landscape Architect. Bloomfield Hills. Michigan

Properties on Back

PAINTABILITY

OSMOSE K-33 is as easily painted as untreated wood. Some pentachlorophenol formulations are considered to yield a paintable product; however, the heavier the oil solvent, the poorer the results are likely to be. In addition to the oil problem, pentachlorophenol has a tendency to migrate to the surface of the wood and "bloom". The "blooming" stains the surfaces of the paint film, causing an unsightly appearance. The risk of "blooming" occurs anytime pentachlorophenol treated wood is painted.

SPECIAL USES

OSMOSE K-33 is suited to all uses for wood preserving or insect-preventative applications; however, it has superior advantages for certain applications, where contact with plants and animals is anticipated, such as:

Stadium Seating
Boardwalks
Marinas
Garden Furniture
Boat Docks
Greenhouses and Growing Tables
Decking
Exterior Railings
Fencing (decorative or practical)

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Data Sheet K-3-74

OSMOSE K-33®

COMPARISON WITH PENTACHLOROPHENOL

PROTECTION AGAINST DECAY AND INSECT ATTACKS

Years of field use and testing throughout the world have proven beyond a doubt that CCA (OSMOSE K-33) type preservatives are equal, if not superior to pentachlorophenol, even in ground contact. When impregnated into wood fibers, OSMOSE K-33 gives permanent protection against insect attack, including the Formosan termite, and prevents the growth of wood-destroying fungi.

RESISTANCE TO LEACHING IN USE

The chemical composition of OSMOSE K-33 reacts with the wood fibers and extractives in the wood, fixing the preservatives permanently in the treated material. Unlike pentachlorophenol, these chemicals cannot change their location in the wood; therefore, they cannot leach out when exposed to moisture. AWPA standards call for CCA type preservatives for use in treating marine piles when there is an extreme borer hazard. Pentachlorophenol is not permitted.

CLEANLINESS

OSMOSE K-33 is carried into the wood by water which is then removed, leaving a clean product that is easily handled. Pentachlorophenol is normally carried into the wood by oil which is impossible to remove completely. Therefore, it can soil anything coming in contact with it.

SAFETY IN HANDLING

OSMOSE K-33 treated lumber can be handled the same as untreated lumber, as it is non-toxic to animals or plants and will not irritate the skin. Premium labor rates are unnecessary since no health hazard exists. Pentachlorophenol may be harmful to plants and animals that come in contact with the treated material and caution must be exercised during handling as it may be irritating to the skin and eyes.

ODOR

OSMOSE K-33 imparts no odor to the wood; therefore, it may be used in any structure or application without fear of objectionable odor. It has no fumes. Pentachlorophenol and its carrier have a persistent odor, especially when used in conjunction with enclosed structures and when in direct association with humans.

COLOR

OSMOSE K-33 lends a permanent silvery-green color to the wood which is often selected by architects as a maintenance-free surface. Pentachlorophenol treated wood may vary from light brown to black, depending on the oil carrier used.

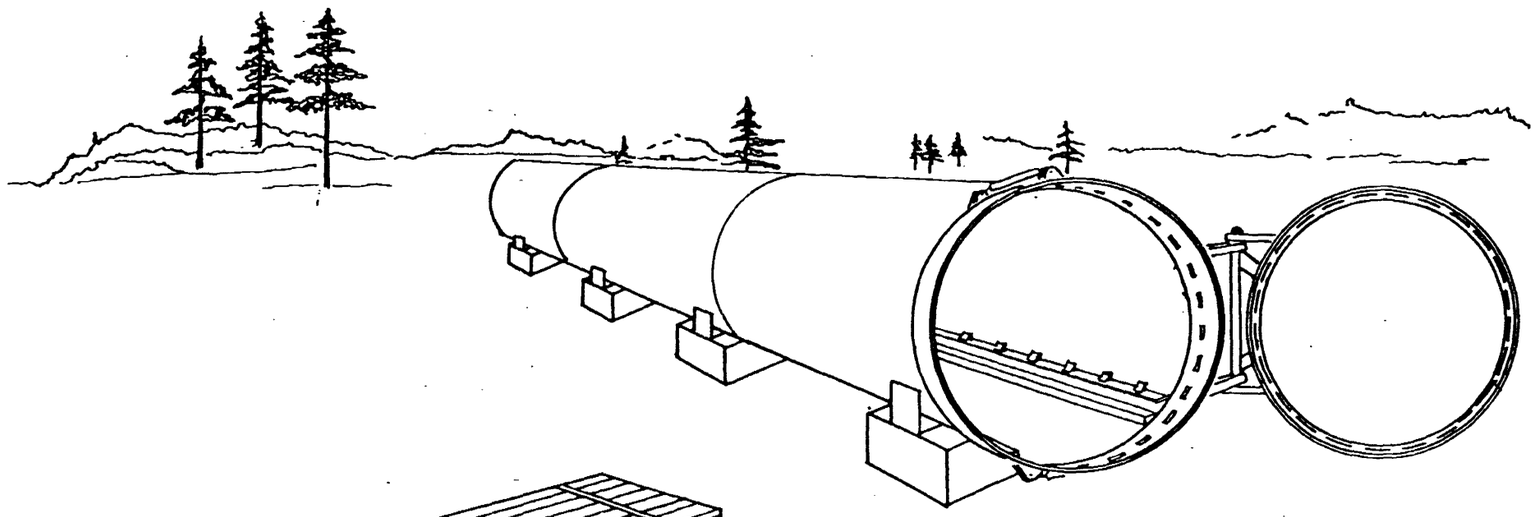
proposed facility

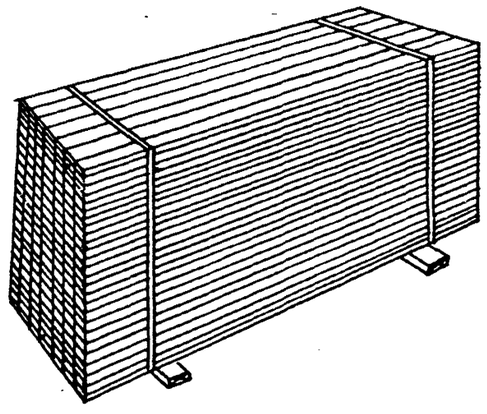
by

Darrell W. Kelsoe & Assoc. Inc.

for

Circle-M-Piling





PREPARED FOR CIRCLE M PILING

3·21·84

Sean Phillips Asst.

APPENDIX A

EAF

ENVIRONMENTAL ASSESSMENT - PART I

Project Information

NOTICE: This document is designed to assist in determining whether the action proposed may have a significant effect on the environment. Please complete the entire Data Sheet. Answers to these questions will be considered as part of the application for approval and may be subject to further verification and public review. Provide any additional information you believe will be needed to complete PARTS 2 and 3.

It is expected that completion of the EAF will be dependent on information currently available and will not involve new studies, research or investigation. If information requiring such additional work is unavailable, so indicate and specify each instance.

NAME OF PROJECT:

Circle M Piling & Lumber Corp.

ADDRESS AND NAME OF APPLICANT:

Circle M Piling & Lumber Corp.
(Name)
1901 Ralph Ave.
(Street)
Brooklyn, New York 11234
(P.O.) (State) (Zip)

NAME AND ADDRESS OF OWNER (If Different)

Walter Kroll
(Name)
Union Ave.
(Street)
Newburgh, N.Y.
(P.O.) (State) (Zip)

BUSINESS PHONE: _____

DESCRIPTION OF PROJECT: (Briefly describe type of project or action) Weather resistant pressure treated lumber business. Temporary site location

(PLEASE COMPLETE EACH QUESTION - Indicate N.A. if not applicable)

A. SITE DESCRIPTION

(Physical setting of overall project, both developed and undeveloped areas)

1. General character of the land: Generally uniform slope X Generally uneven and rolling or irregular ____.

2. Present land use: Urban ____, Industrial X, Commercial ____, Suburban ____, Rural ____, Forest ____, Agriculture ____, Other _____.

3. Total acreage of project area: 3 acres. There will be no physical change to site.

Approximate acreage:	Presently	After Completion
Meadow or Brushland	____acres	____acres
Forested	____acres	____acres
Agricultural	____acres	____acres
Wetland (Freshwater or Tidal as per Articles 24, 25 or F.C.L.)	____acres	____acres
Water Surface Area	____acres	____acres
Unvegetated (rock, earth or fill)	____acres	____acres
Roads, buildings and other paved surfaces	____acres	____acres
Other (indicate type)	____acres	____acres

4. What is predominant soil type(s) on project site? gravel fill

5. a. Are there bedrock outcroppings on project site? ____Yes X No

b. What is depth to bedrock? unknown (In feet)

6. Approximate percentage of proposed project site with slopes: 0-10% X %; 10-15% ____%; 15% or greater ____%.

7. Is project contiguous to, or contain a building or site listed on the National Register of Historic Places? ____Yes X No

8. What is the depth to the water table? 4 feet

9. Do hunting or fishing opportunities presently exist in the project area? ____Yes X No

10. Does project site contain any species of plant or animal life that is identified as threatened or endangered - ____Yes X No, according to - Identify each species Not appriopriate
Natural environment as the site is a prepared industrial site.

11. Are there any unique or unusual land forms on the project site? (i.e. cliffs, dunes, other geological formations - ____Yes XX No. (Describe _____)

12. Is the project site presently used by the community or neighborhood as an open space or recreation area - ____Yes XX No.

13. Does the present site offer or include scenic views or vistas known to be important to the community? ____Yes X No Not one know to the community but riverfront vistas do include Bannerman's Castle and StormKing Mountain.

14. Streams within or contiguous to project area:

a. Name of stream and name of river to which it is tributary Hudson River

15. Lakes, Ponds, Wetland areas within or contiguous to project area:

a. Name _____; b. Size (in acres) _____

16. What is the dominant land use and zoning classification within a 1/4 mile radius of the project (e.g. single family residential, R-2) and the scale of development (e.g. 2 story).
Industrial (PI)

B. PROJECT DESCRIPTION There will be no physical change to project site

1. Physical dimensions and scale of project (fill in dimensions as appropriate)

a. Total contiguous acreage owned by project sponsor 25.2 acres. Only 3 acres of the total site will be leased for this project.

b. Project acreage developed: ____ acres initially; ____ acres ultimately.

c. Project acreage to remain undeveloped _____.

d. Length of project, in miles: _____(if appropriate)

e. If project is an expansion of existing, indicate percent of expansion proposed: building square footage 0; developed acreage 0.

f. Number of off-street parking spaces existing _____; proposed _____. 26 Parking spaces will be utilized in the 3 acre established site.

g. Maximum vehicular trips generated per hour 1truck (upon completion of project)

h. If residential: Number and type of housing units:

	One Family	Two Family	Multiple Family	Condominium
Initial				
Ultimate				

i. If:

	Orientation Neighborhood-City-Regional	Estimated Employment
Commercial		
Industrial		20

j. Total height of tallest proposed structure _____feet. Existing structures to be used.

2. How much natural material (i.e. rock, earth, etc.) will be removed from the site - _____tons None

_____cubic yards.

3. How many acres of vegetation (trees, shrubs, ground covers) will be removed from site - ____acres.

4. Will any mature forest (over 100 years old) or other locally-important vegetation be removed by this project? ____Yes __X__No

5. Are there any plans for re-vegetation to replace that removed during construction? ____Yes ____No Need

6. If single phase project: Anticipated period of construction ____months, (including demolition).

7. If multi-phased project: a. Total number of phases anticipated __1__No. (Moving)

b. Anticipated date of commencement phase 1 __4/1__month __84__year (including demolition)

c. Approximate completion date final phase __4/15/__month __84__year.

d. Is phase 1 financially dependent on subsequent phases? ____Yes ____No

8. Will blasting occur during construction? ____Yes __X__No MOVE

9. Number of jobs generated: during construction ____; after ~~project~~ XXXXX is complete __20__.

10. Number of jobs eliminated by this project ____. None

11. Will project require relocation of any projects or facilities? ____Yes __X__No. If yes, explain:

_____.

12. a. Is surface or subsurface liquid waste disposal involved? ____Yes __X__No.

b. If yes, indicate type of waste (sewage, industrial, etc.) _____.

c. If surface disposal name of stream into which effluent will be discharged _____.

13. Will surface area of existing lakes, ponds, streams, bays or other surface waterways be increased or decreased by proposal? ____Yes __X__No.

14. Is project or any portion of project located in the 100 year flood plain? __XX__Yes ____No
Portable equipment can easily and quickly be removed from area

15. a. Does project involve disposal of solid waste? ____Yes __X__No

b. If yes, will an existing solid waste disposal facility be used? ____Yes ____No

c. If yes, give name: _____; location _____.

d. Will any wastes not go into a sewage disposal system or into a sanitary landfill? ____Yes ____No

16. Will project use herbicides or pesticides? ____Yes __X__No

17. Will project routinely produce odors (more than one hour per day)? ____Yes __X__No

18. Will project produce operating noise exceeding the local ambience noise levels? ____Yes __X__No

19. Will project result in an increase in energy use? __X__Yes ____No. If yes, indicate type(s) _____
Electricity for office and wood preservation activities.
_____.

20. If water supply is from wells indicate pumping capacity _____ gals/minute. N/A

21. Total anticipated water usage per day __2000__gals/day.

22. Zoning: a. What is dominant zoning classification of site? __Industrial__.

b. Current specific zoning classification of site __PI Industrial__.

c. Is proposed use consistent with present zoning? __Yes (site is a former lumber yard)__

d. If no, indicate desired zoning _____.

26. Approvals: a. Is any Federal permit required? ____Yes X No

b. Does project involve State or Federal funding or financing? ___Yes ____No

c. Local and Regional approvals:

	Approval Required (Yes, No)	(Type)	Submittal (Date)	Approval (Date)
City, Town, Village Board				
City, Town, Village Planning Board				
City, Town, Zoning Board				
City, County Health Department				
Other local agencies				
Other regional agencies				
State Agencies				
Federal Agencies				

C. INFORMATIONAL DETAILS

Attach any additional information as may be needed to clarify your project. If there are or may be any adverse impacts associated with the proposal, please discuss such impacts and the measures which can be taken to mitigate or avoid them.

PREPARER'S SIGNATURE: Robbe P. Stimson Robbe P.Stimson

TITLE: ENVIRONMENTAL CONSULTANT

REPRESENTING: Circle M Piling & Lumber Corp.

DATE: 4/28/84

ENVIRONMENTAL ASSESSMENT - PART II

Project Impacts and Their Magnitude

General Information (Read Carefully)

- In completing the form the reviewer should be guided by the question: Have my decisions and determinations been reasonable? The reviewer is not expected to be an expert environmental analyst.
- Identifying that an effect will be potentially large (column 2) does not mean that it is also necessarily significant. Any large effect must be evaluated in PART 3 to determine significance. By identifying an effect in column 2 simply asks that it be looked at further.
- The Examples provided are to assist the reviewer by showing types of effects and wherever possible the threshold of magnitude that would trigger a response in column 2. The examples are generally applicable throughout the State and for most situations. But, for any specific project or site other examples and/or lower thresholds may be more appropriate for a Potential Large Impact rating.
- Each project, on each site, in each locality, will vary. Therefore, the examples have been offered as guidance. They do not constitute an exhaustive list of impacts and thresholds to answer each question.
- The number of examples per question does not indicate the importance of each question.

INSTRUCTIONS (Read Carefully)

a. Answer each of the 18 questions in PART 2. Answer Yes if there will be any effect.

b. Maybe answers should be considered as Yes answers.

c. If answering Yes to a question then check the appropriate box (column 1 or 2) to indicate the potential size of the impact. If impact threshold equals or exceeds any example provided, check column 2. If impact will occur but threshold is lower than example, check column 1.

d. If reviewer has doubt about the size of the impact then consider the impact as potentially large and proceed to PART 3.

e. If a potentially large impact or effect can be reduced by a change in the project to a less than large magnitude, place a Yes in column 3. A No response indicates that such a reduction is not possible.

		1. SMALL TO MODERATE IMPACT	2. POTENTIAL LARGE IMPACT	3. CAN IMPACT BE REDUCED BY PROJECT CHANGE
IMPACT ON LAND	NO (X) YES ( )			
1. WILL THERE BE AN EFFECT AS A RESULT OF A PHYSICAL CHANGE TO PROJECT SITE?				
Examples that Would Apply to Column 2				
___ Any construction on slopes of 15% or greater, (15 foot rise per 100 foot of length), or where the general slopes in the project area exceed 10%.		___	___	___
___ Construction on Land where the depth to the water table is less than 3 feet.		___	___	___
___ Construction of paved parking area for 1,000 or more vehicles.		___	___	___
___ Construction on land where bedrock is exposed or generally within 3 feet of existing ground surface.		___	___	___
___ Construction that will continue for more than 1 year or involve more than one phase or stage.		___	___	___
___ Excavation for mining purposes that would remove more than 1,000 tons of natural material (i.e. rock or soil) per year.		___	___	___
___ Construction of any new sanitary landfill.		___	___	___

		1. SMALL TO MODERATE IMPACT	2. POTENTIAL LARGE IMPACT	3. CAN IMPACT BE REDUCED BY PROJECT CHANGE
___	Construction in a designated floodway.	___	___	___
___	Other impacts: _____	___	___	___
	_____	___	___	___

2. WILL THERE BE AN EFFECT TO ANY UNIQUE OR UNUSUAL LAND FORMS FOUND ON THE SITE? (i.e. cliffs, dunes, geological formations, etc.) NO (XX) YES ( )

___	Specific land forms: _____	___	___	___
	_____	___	___	___

IMPACT ON WATER

3. WILL PROJECT AFFECT ANY WATER BODY DESIGNATED AS PROTECTED? (Under Articles 15, 24, 25 of the Environmental Conservation Law, E.C.L.) NO (X) YES ( )

Examples that Would Apply to Column 2

___	Dredging more than 100 cubic yards of material from channel of a protected stream.	___	___	___
___	Construction in a designated freshwater or tidal wetland.	___	___	___
___	Other impacts: _____	___	___	___
	_____	___	___	___

4. WILL PROJECT AFFECT ANY NON-PROTECTED EXISTING OR NEW BODY OF WATER? NO (XX) YES ( )

Examples that Would Apply to Column 2

___	A 10% increase or decrease in the surface area of any body of water or more than a 10 acre increase or decrease.	___	___	___
___	Construction of a body of water that exceeds 10 acres of surface area.	___	___	___
___	Other impacts: _____	___	___	___
	_____	___	___	___

5. WILL PROJECT AFFECT SURFACE OR GROUNDWATER QUALITY? NO (X) YES ( )

Examples that Would Apply to Column 2

___	Project will require a discharge permit.	___	___	___
___	Project requires use of a source of water that does not have approval to serve proposed project.	___	___	___
___	Project requires water supply from wells with greater than 45 gallons per minute pumping capacity.	___	___	___
___	Construction or operation causing any contamination of a public water supply system.	___	___	___
___	Project will adversely affect groundwater.	___	___	___
___	Liquid effluent will be conveyed off the site to facilities which presently do not exist or have inadequate capacity.	___	___	___
___	Project requiring a facility that would use water in excess of 20,000 gallons per day.	___	___	___
___	Project will likely cause siltation or other discharge into an existing body of water to the extent that there will be an obvious visual contrast to natural conditions.	___	___	___

		1. SMALL TO MODERATE IMPACT	2. POTENTIAL LARGE IMPACT	3. CAN IMPACT BE REDUCED BY PROJECT CHANGE
___	Other Impacts: _____	___	___	___
	_____	___	___	___
6.	WILL PROJECT ALTER DRAINAGE FLOW, PATTERNS OR SURFACE WATER RUNOFF? ..... NO (X) YES ( )			
	Example that Would Apply to Column 2			
___	Project would impede flood water flows.	___	___	___
___	Project is likely to cause substantial erosion.	___	___	___
___	Project is incompatible with existing drainage patterns.	___	___	___
___	Other impacts: _____	___	___	___
	IMPACT ON AIR			
7.	WILL PROJECT AFFECT AIR QUALITY?..... NO (X) YES ( )			
	Examples that Would Apply to Column 2			
___	Project will induce 1,000 or more vehicle trips in any given hour.	___	___	___
___	Project will result in the incineration of more than 1 ton of refuse per hour.	___	___	___
___	Project emission rate of all contaminants will exceed 5 lbs. per hour or a heat source producing more than 10 million BTU's per hour.	___	___	___
___	Other impacts: _____	___	___	___
	_____	___	___	___
	IMPACT ON PLANTS AND ANIMALS			
8.	WILL PROJECT AFFECT ANY THREATENED OR ENDANGERED SPECIES? NO (X) YES ( )			
	Examples that Would Apply to Column 2			
___	Reduction of one or more species listed on the New York or Federal list, using the site, over or near site or found on the site.	___	___	___
___	Removal of any portion of a critical or significant wildlife habitat.	___	___	___
___	Application of Pesticide or herbicide over more than twice a year other than for agricultural purposes.	___	___	___
___	Other impacts: _____	___	___	___
	_____	___	___	___
9.	WILL PROJECT SUBSTANTIALLY AFFECT NON-THREATENED OR ENDANGERED SPECIES? ..... NO (X) YES ( )			
	Example that Would Apply to Column 2			
___	Project would substantially interfere with any resident or migratory fish or wildlife species.	___	___	___
___	Project requires the removal of more than 10 acres of mature forest (over 100 years in age) or other locally important vegetation.	___	___	___

		1. SMALL TO MODERATE IMPACT	2. POTENTIAL LARGE IMPACT	3. CAN IMPACT BE REDUCED BY PROJECT CHANGE
IMPACT ON VISUAL RESOURCE				
10. WILL THE PROJECT AFFECT VIEWS, VISTAS OR THE VISUAL CHARACTER OF THE NEIGHBORHOOD OR COMMUNITY?	NO (X) YES ( )			
Examples that Would Apply to Column 2				
___ An incompatible visual affect caused by the introduction of new materials, colors and/or forms in contrast to the surrounding landscape.		___	___	___
___ A project easily visible, not easily screened, that is obviously different from others around it.		___	___	___
___ Project will result in the elimination or major screening of scenic views or vistas known to be important to the area.		___	___	___
___ Other impacts: _____		___	___	___
_____		___	___	___
IMPACT ON HISTORIC RESOURCES				
11. WILL PROJECT IMPACT ANY SITE OR STRUCTURE OF HISTORIC, PRE-HISTORIC OR PALEONTOGICAL IMPORTANCE?	NO (X) YES ( )			
Examples that Would Apply to Column 2				
___ Project occuring wholly or partially within or contiguous to any facility or site listed on the National Register of historic places.		___	___	___
___ Any impact to an archeological site or fossil bed located within the project site.		___	___	___
___ Other impacts: _____		___	___	___
_____		___	___	___
IMPACT ON OPEN SPACE & RECREATION				
12. WILL THE PROJECT AFFECT THE QUANTITY OR QUALITY OF EXISTING OR FUTURE OPEN SPACES OR RECREATIONAL OPPORTUNITIES?.....	NO (X) YES ( )			
Examples that Would Apply to Column 2				
___ The permanent foreclosure of a future recreational opportunity.		___	___	___
___ A major reduction of an open space important to the community.		___	___	___
___ Other impacts: _____		___	___	___
_____		___	___	___
IMPACT ON TRANSPORTATION				
13. WILL THERE BE AN EFFECT TO EXISTING TRANSPORTATION SYSTEMS?	NO (X) YES ( )			
Examples that Would Apply to Column 2				
___ Alteration of present patterns of movement of people and/or goods.		___	___	___
___ Project will result in severe traffic problems.		___	___	___
___ Other impacts: _____		___	___	___
_____		___	___	___

			1	2	3
			SMALL TO MODERATE IMPACT	POTENTIAL LARGE IMPACT	CAN IMPACT BE REDUCED BY PROJECT CHANGE
	IMPACT ON ENERGY				
14.	WILL PROJECT AFFECT THE COMMUNITIES SOURCES OF FUEL OR ENERGY SUPPLY?	NO (XX) YES ( )			
	Examples that Would Apply to Column 2				
___	Project causing greater than 5% increase in any form of energy used in municipality.		___	___	___
___	Project requiring the creation or extension of an energy transmission or supply system to serve more than 50 single or two family residences.		___	___	___
___	Other impacts: _____		___	___	___
	_____		___	___	___
	IMPACT ON NOISE				
15.	WILL THERE BE OBJECTIONABLE ODORS, NOISE, GLARE, VIBRATION or ELECTRICAL DISTURBANCE AS A RESULT OF THIS PROJECT?	NO (X) YES ( )			
	Examples that Would Apply to Column 2				
___	Blasting within 1,500 feet of a hospital, school or other sensitive facility.		___	___	___
___	Odors will occur routinely (more than one hour per day).		___	___	___
___	Project will produce operating noise exceeding the local ambient noise levels for noise outside of structures.		___	___	___
___	Project will remove natural barriers that would act as a noise screen.		___	___	___
___	Other impacts: _____		___	___	___
	_____		___	___	___
	IMPACT ON HEALTH & HAZARDS				
16.	WILL PROJECT AFFECT PUBLIC HEALTH AND SAFETY?	NO (X) YES ( )			
	Examples that Would Apply to Column 2				
___	Project will cause a risk of explosion or release of hazardous substances (i.e. oil, pesticides, chemicals, radiation, etc.) in the event of accident or upset conditions, or there will be a chronic low level discharge or emission.		___	___	___
___	Project that will result in the burial of "hazardous wastes" (i.e. toxic, poisonous, highly reactive, radioactive, irritating, infectious, etc., including wastes that are solid, semi-solid, liquid or contain gases.)		___	___	___
___	Storage facilities for one million or more gallons of liquified natural gas or other liquids.		___	___	___
___	Other impacts: _____		___	___	___
	_____		___	___	___

	MODERATE IMPACT	LARGE IMPACT	CAN IMPACT BE REDUCED BY PROJECT CHANGE

IMPACT ON GROWTH AND CHARACTER OF COMMUNITY OR NEIGHBORHOOD

17. WILL PROJECT AFFECT THE CHARACTER OF THE EXISTING COMMUNITY? ..... NO (X) YES ( )

Example that Would Apoly to Column 2

___ The population of the City, Town or Village in which the project is located is likely to grow by more than 5% of resident human population.

___ The municipal budgets for capital expenditures or operating services will increase by more than 5% per year as a result of this project.

___ Will involve any permanent facility of a non-agricultural use in an agricultural district or remove prime agricultural lands from cultivation.

___ The project will replace or eliminate existing facilities, structures or areas of historic importance to the community.

___ Development will induce an influx of a particular age group with special needs.

___ Project will set an important precedent for future projects.

___ Project will relocate 15 or more employees in one or more businesses.

___ Other impacts: _____

_____

18. IS THERE PUBLIC CONTROVERSY CONCERNING THE PROJECT? ..... NO (XX) YES ( )

Examples that Would Apply to Column 2

___ Either government or citizens of adjacent communities have expressed opposition or rejected the project or have not been contacted.

___ Objections to the project from within the community.

IF ANY ACTION IN PART 2 IS IDENTIFIED AS A POTENTIAL LARGE IMPACT OR IF YOU CANNOT DETERMINE THE MAGNITUDE OF IMPACT, PROCEED TO PART 3.

PORTIONS OF EAF COMPLETED FOR THIS PROJECT:

PART I ____ PART II ____ PART 3 ____

DETERMINATION

Upon review of the information recorded on this EAF (Parts 1, 2 and 3) and considering both the magnitude and importance of each impact, it is reasonably determined that:

A. The project will result in no major impacts and, therefore, is one which may not cause significant damage to the environment.

PREPARE A NEGATIVE DECLARATION ( )

B. Although the project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described in PART 3 have been included as part of the proposed project.

PREPARE A NEGATIVE DECLARATION ( )

C. The project will result in one or more major adverse impacts that cannot be reduced and may cause significant damage to the environment.

PREPARE POSITIVE DECLARATION PROCEED WITH EIS ( )

_____
Date

_____
Signature of Preparer (if different from responsible officer)

_____
Signature of Responsible Official in Lead Agency

_____
Print or type name of responsible official in Lead Agency

ENVIRONMENTAL ASSESSMENT - PART III

EVALUATION OF THE IMPORTANCE OF IMPACTS

INFORMATION

- Part 3 is prepared if one or more impact or effect is considered to be potentially large.
- The amount of writing necessary to answer Part 3 may be determined by answering the question: In briefly completing the instructions below have I placed in this record sufficient information to indicate the reasonableness of my decisions?

INSTRUCTIONS

Complete the following for each impact or effect identified in Column 2 of Part 2:

1. Briefly describe the impact.
2. Describe (if applicable) how the impact might be mitigated or reduced to a less than large impact by a project change.
3. Based on the information available, decide if it is reasonable to conclude that this impact is important to the minicipality (city, town or village) in which the project is located.

   To answer the question of importance, consider:

   - The probability of the impact or effect occurring
   - The duration of the impact or effect
   - Its irreversibility, including permanently lost resources or values
   - Whether the impact or effect can be controlled
   - The regional consequence of the impact or effect
   - Its potential divergence from local needs and goals
   - Whether known objections to the project apply to this impact or effect.

DETERMINATION OF SIGNIFICANCE

An action is considered to be significant if:

One (or more) impact is determined to both large and its (their) consequence, based on the review above, is important.

PART III STATEMENTS

(Continue on Attachments, as needed)

APPENDIX B

SHORT ENVIRONMENTAL ASSESSMENT FORM

INSTRUCTIONS:

(a) In order to answer the questions in this short EAF is is assumed that the preparer will use currently available information concerning the project and the likely impacts of the action. It is not expected that additional studies, research or other investigations will be undertaken.

(b) If any question has been answered Yes the project may be significant and a completed Environmental Assessment Form is necessary.

(c) If all questions have been answered No it is likely that this project is not significant.

(d) Environmental Assessment

1.	Will project result in a large physical change to the project site or physically alter more than 10 acres of land?	___ Yes X No
2.	Will there be a major change to any unique or unusual land form found on the site?	___ Yes X No
3.	Will project alter or have a large effect on an existing body of water?	___ Yes X No
4.	Will project have a potentially large impact on groundwater quality?	___ Yes X No
5.	Will project significantly effect drainage flow on adjacent sites?	___ Yes X No
6.	Will project affect any threatened or endangered plant or animal species?	___ Yes X No
7.	Will project result in a major adverse effect on air quality?	___ Yes X No
8.	Will project have a major effect on visual character of the community or scenic views or vistas known to be important to the community? . . .	___ Yes X No
9.	Will project adversely impact any site or structure of historic, pre-historic, or paleontological importance or any site designated as a critical environmental area by a local agency? . . .	___ Yes X No
10.	Will project have a major effect on existing or future recreational opportunities? . . .	___ Yes X No
11.	Will project result in major traffic problems or cause a major effect to existing transportation systems?	___ Yes X No
12.	Will project regularly cause objectionable odors, noise, glare, vibration, or electrical disturbance as a result of the project's operation? .	___ Yes X No
13.	Will project have any impact on public health or safety?	___ Yes X No
14.	Will project affect the existing community by directly causing a growth in permanent population of more than 5 percent over a one-year period or have a major negative effect on the character of the community or neighborhood? . .	___ Yes X No
15.	Is there public controversy concerning the project?	___ Yes X No

PREPARER'S SIGNATURE: Robbe P. Stimson TITLE: Environmental Consultant

REPRESENTING: Circle M Piling & Lumber Corp. DATE: 4/28/84

9/1/78

Planning Bd
Received 3/28/84
ph

INTER-OFFICE CORRESPONDENCE

TO: Town Planning Board Chairman

FROM: Town Fire Inspector

DATE: 28 March 1984

SUBJECT: Circle M Piling & Lumber Corp.

A site inspection of the aforementioned subject was conducted this date by the Building Inspector, Town Engineer and this writer.

With regards to fire prevention, I find no reason to disallow the use of the building and property by Circle M. Piling & Lumber Corp., and would like to recommend that they be allowed to use the premises.

Very truly yours,

Robert F. Rodgers

cc: Town Building Inspector
Town Engineer

Town of New Windsor
555 Union Avenue
New Windsor, New York 12550

Date Received _____
Meeting Date _____
Public Hearing _____
Action Date _____
Fees Paid _____

APPLICATION FOR SITE PLAN APPROVAL

1. Name of Project CIRCLE M PILING LUMBER CORP.

2. Name of applicant Michael Andrews Phone 914-454-7000
   Address 1 Hoffman Street, Poughkeepsie, New York 12601
   (Street No. & Name) (Post Office) (State) (Zip Code)

3. Owner of record Walter Kroll Phone
   Address Union Ave., Newburgh, N.Y. 12550
   (Street No. & Name) (Post Office) (State) (Zip Code)

4. Name of person preparing plan Don Close Phone 914-297-3082
   Address Route 376, Wappingers Falls, N.Y. 12590
   (Street No. & Name) (Post Office) (State) (Zip Code)

5. Attorney Lou Lewis Phone 914-454-1200
   Address 50 Market Street, Poughkeepsie, N.Y. 12601
   (Street No. & Name) (Post Office) (State) (Zip Code)

6. Location: On the EAST side of RIVER ROAD
   (Street)
   Approx. 500 ft. feet East (West Shore of Hudson River)
   (direction)
   of Right of Way
   (Street)

7. Acreage of parcel 25.2 Overall (our use 3 acres)

8. Zoning district P.I.

9. Tax map designation: Section 9 Block 1 Lot(s) 74

10. This application is for the use ~~and construction of~~ Attached out building for weather proofing lumber; in a fully enclosed autoclave. Additional existing building for office purposes, and for outside storage of lumber products.

11. Has the Zoning Board of Appeals granted any variance or special permit concerning t
    property? _____ If so, list case No. and Name _____

12. List all contiguous holdings in the same ownership NONE
    Section _____ Block _____ Lot(s) _____

FOR OFFICE USE ONLY:

Schedule _____ Column _____ Number _____

... of land were acquired, together with the liber and page of each conveyance into the present owner as recorded in the Orange County Clerk's Office. This affidavit shall indicate the legal owner of the property, the contract owner of the property and the date the contract of sale was executed.

IN THE EVENT OF CORPORATE OWNERSHIP: A list of all directors, officers and stockholders of each corporation owning more than five percent (5%) of any class of stock must be attached.

I HEREBY DEPOSE AND SAY THAT ALL THE ABOVE STATEMENTS AND INFORMATION, AND ALL STATEMENTS AND INFORMATION, CONTAINED IN THE SUPPORTING DOCUMENTS AND DRAWINGS ATTACHED HERETO ARE TRUE.

Sworn before me this

26th day of March, 1984

Circle M Piling Corp.

Michael Andrews
Applicant's Signature

Vice President
Title

Mary Benedict
Notary Public
Notary Public, State of New York
No. 4764738
Qualified in Orange County
My Commission Expires March 30, 1985

OWNER'S ENDORSEMENT

(Completion required ONLY if applicable)

COUNTY OF ORANGE }
STATE OF NEW YORK } SS.:

Walter Kroll being duly sworn, deposes and says that he resides

Union Ave., Newburgh, New York (Owner's Address) in the

county of Orange and State of New York

and that he is (the owner in fee) of ( ) (Official Title) of the

Corporation which is the owner in fee) of the premises described in the foregoing applicatio

and that he has authorized Michael Andrews of Circle M Piling ~~Lumber Corp.~~ to make the foregoing application for special use approval as described herein.

Sworn before me this.

26th day of March, 1984

Walter Kroll
(Owner's Signature)

Notary Public
[illegible] STEVAK
NOTARY PUBLIC, STATE OF NEW YORK
RESIDING IN ORANGE COUNTY
COMMISSION EXPIRES MARCH 30, 19[illegible]

Dec 4 Bk 1 Lot 74

NEWBURGH

N 542,000
E 590,000

69
19.6 A (C)

2450 S AVENUE

1222.8

L 8205

303

2505

102 1.2A(C)

72
6.6A(C)

550S

VERPLANK AVE.

555S

71
11.8 A

360 2

70.1
14.7A(C)

70.2
3.1 A

473.5

CONSOLIDATED

73
8.3 A

78.232
11.5 A(C)

78.231
3.4 A

77
3.6 A

82
2.2A(C)

751.3A(C)

78.1

78.21

83
2A(C)
County of Orange

76
1.4A

78.22
8.4A

84.2
3 A(C)

74
25.2A(C)

79

103

85

86

84

87
9.1A(C)

93
5A(C)

88
2.9A

90
9.3 A(C)

94
5.1 A (C)

95
2.7 A

89

91
1.5 A

92

96
10.4A(C)

RAIL

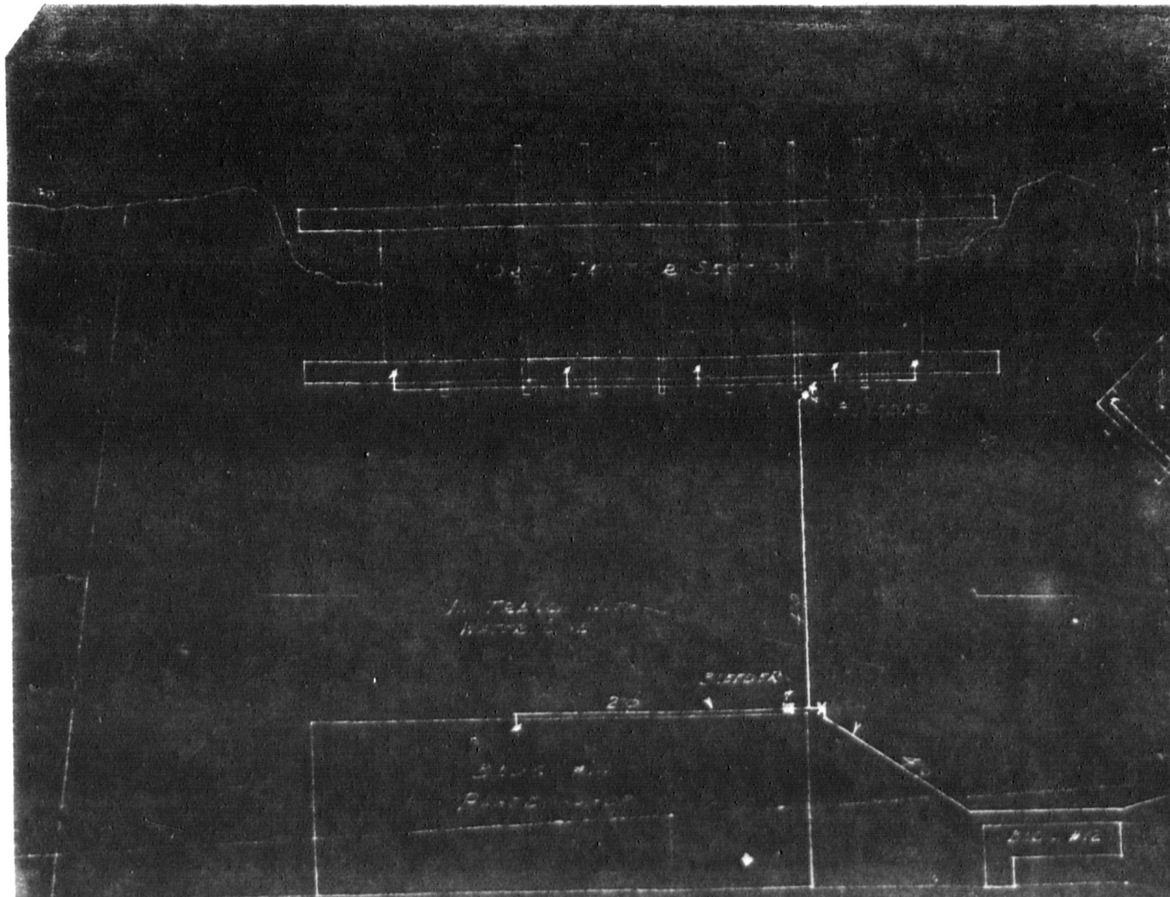
97
6.1 A

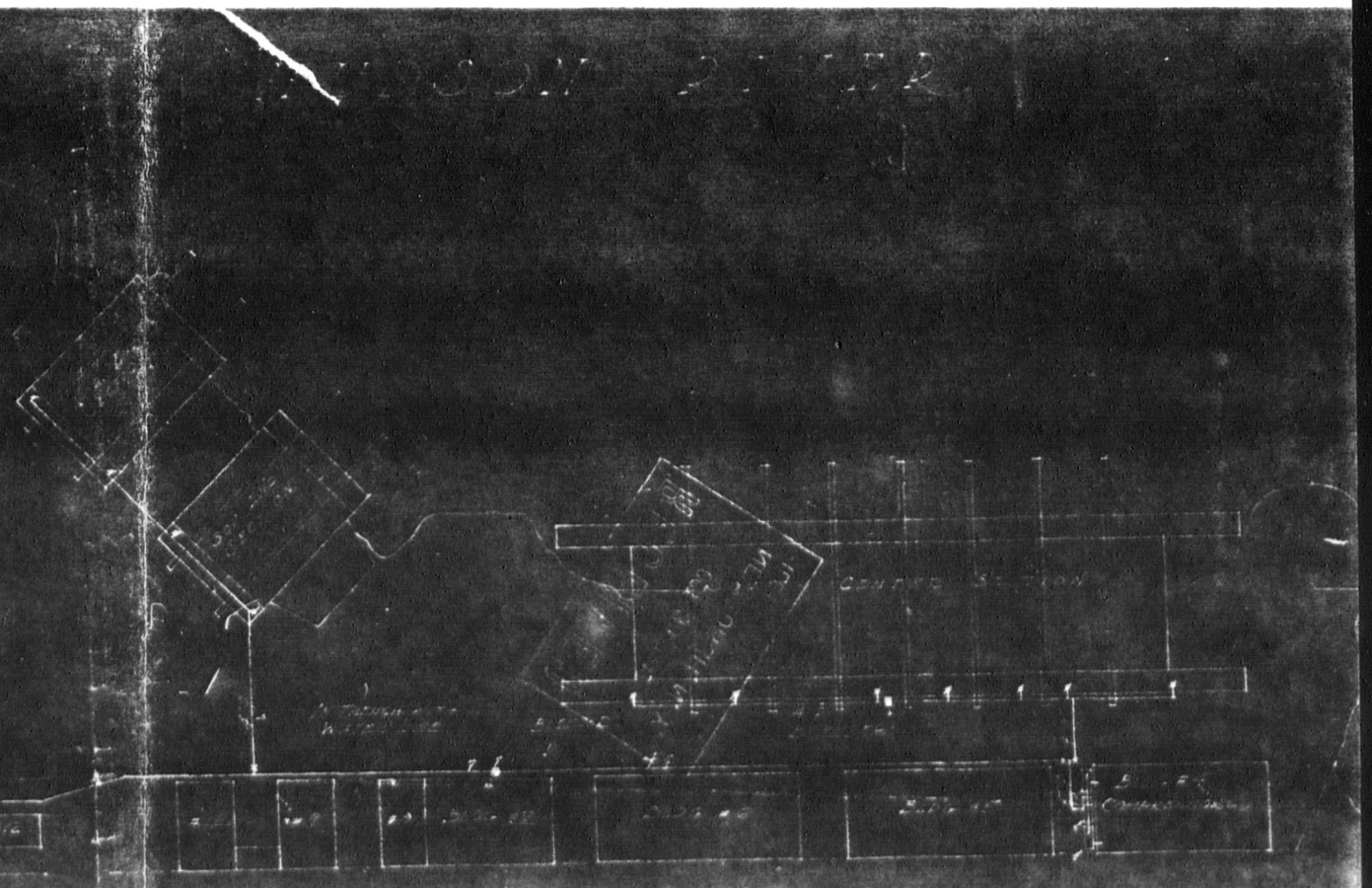
98
4.4 A

Wood Storage Area

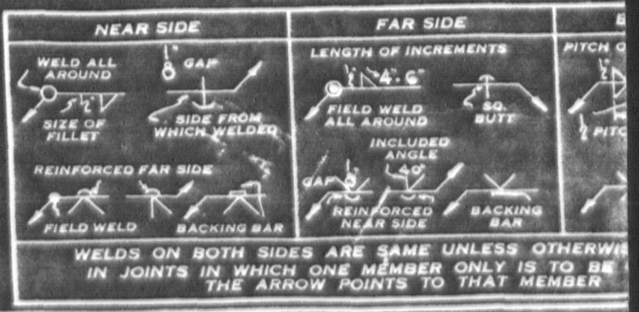
HUDSON

SEE SECTION 20
1" = 100'





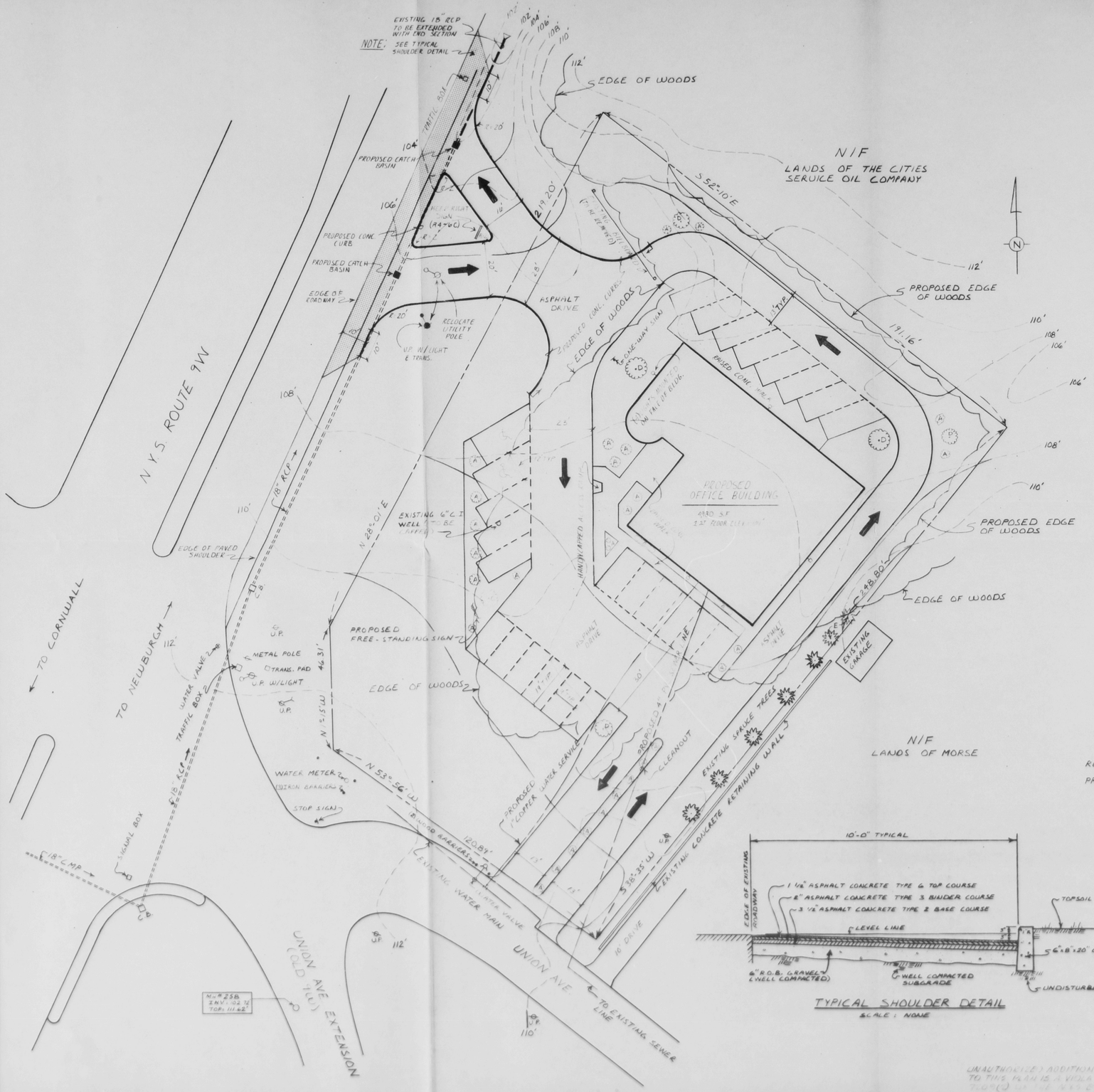
KEY TO WELD SYMBOLS



WELDS ON BOTH SIDES ARE SAME UNLESS OTHERWI
IN JOINTS IN WHICH ONE MEMBER ONLY IS TO BE
THE ARROW POINTS TO THAT MEMBER

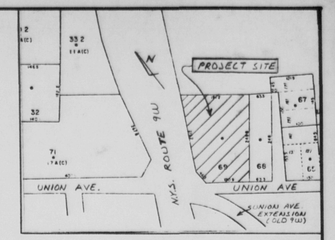
REVISIONS			
NO.	DATE	BY	REMARKS

CHICAGO BRIDGE & IRON
CHICAGO, ILL.-GREENVILLE, PA.-BI



TYPICAL SHOULDER DETAIL
SCALE: NONE

PLANTING SCHEDULE		
NUMBER & SYMBOL	PLANT NAME	QUANTITY
A. (A)	PFITZER'S JUNIPER	29
B. (B)	JAPANESE YEW	2
C. (C)	JAPANESE MAPLE	1
D. (D)	RED MAPLE	5
E. (A)	NORWAY SPRUCE	2



SITE LOCATION MAP
SCALE: 1" = 200'±

LEGEND:
EXISTING CONTOURS
PROPOSED CONTOURS

GENERAL NOTES:

1. BEING A PROPOSED SITE DEVELOPMENT OF THE LANDS SHOWN ON THE TOWN OF NEW WINDSOR TAX MAPS AS SECTION 20, BLOCK 2, LOT 69.
2. PROPERTY OWNER: PETER M. OLYMPIA
3. PROPERTY DEVELOPER: DR. JONATHAN GOODSON & DR. AGIT I ANTONY
   302 ROUTE 9W
   NEW WINDSOR, N.Y. 12550
4. PROPERTY AREA: 0.96±ACRES
5. PROPERTY ZONE: P-I
6. PROPOSED USE: OFFICE BUILDING FOR PROFESSIONAL OFFICES
7. TOPOGRAPHIC AND PLANIMETRIC INFORMATION SHOWN HEREON ARE FROM A FIELD SURVEY OF 23 AUGUST, 1983. PROPERTY LINES SHOWN WERE PLOTTED FROM DEEDS OF RECORD AND PHYSICAL MONUMENTATION FOUND DURING THE TOPOGRAPHIC SURVEY, PENDING COMPLETION OF THE BOUNDARY SURVEY.

*TABLE OF BULK REGULATIONS - PART II - NON-RESIDENTIAL DISTRICTS

1	2	3	4	5	6	7	8	9
DISTRICT	USE GROUP	MINIMUM LOT AREA (IN SQ. FT.)	MINIMUM LOT WIDTH (IN FEET)	REQUIRED FRONT YARD DEPTH (IN FEET)	REQUIRED SIDE YARD; TOTAL BOTH SIDE YARDS (IN FEET)	REQUIRED REAR YARD DEPTH (IN FEET)	FLOOR AREA RATIO	MAXIMUM BUILDING HEIGHT (IN FEET)
P-I	*00	40,000	150	50	15/40	20	0.6	25
		41,684±	153±	60±	50'/180±	27±	0.12	12±

REQUIRED:
PROVIDED:

* NOTE: BASED ON PERMITTED USE LISTED IN COL. A, NO. 3, IN THE P-I ZONE, TABLE OF USE REGULATIONS.

REQUIRED PARKING: BASED ON THE TABLE OF GENERAL USE REQUIREMENTS - PART II - NON-RESIDENTIAL DISTRICTS:
1 SPACE / 200 S.F. OF FLOOR AREA
4980 S.F. / 200 S.F. = 25 PARKING SPACES REQUIRED

PROVIDED PARKING: 25 SPACES, INCLUDING 2 HANDICAPPED SPACES

REQUIRED SIZE OF SIGN: NOT GREATER THAN 40 S.F. AND NOT HIGHER THAN 12'

PROVIDED SIZE OF SIGN: 25 S.F. SIGN - 5'x5'

Site Plan APPROVAL GRANTED
BY TOWN OF NEW WINDSOR PLANNING BOARD
ON 3-28-84
BY Henry F. Scheible
HENRY F. SCHEIBLE
SECRETARY

(ANY UNAUTHORIZED ADDITION OR ALTERATION TO THIS PLAN IS A VIOLATION OF SECTION 7209(2) OF THE N.Y.S. EDUCATION LAW.

McGOEY, HAUSER & GREVAS
CONSULTING ENGINEERS
45 Quassaick Ave. (Rte. 9-W) New Windsor, New York
9 High Street Port Jervis, New York

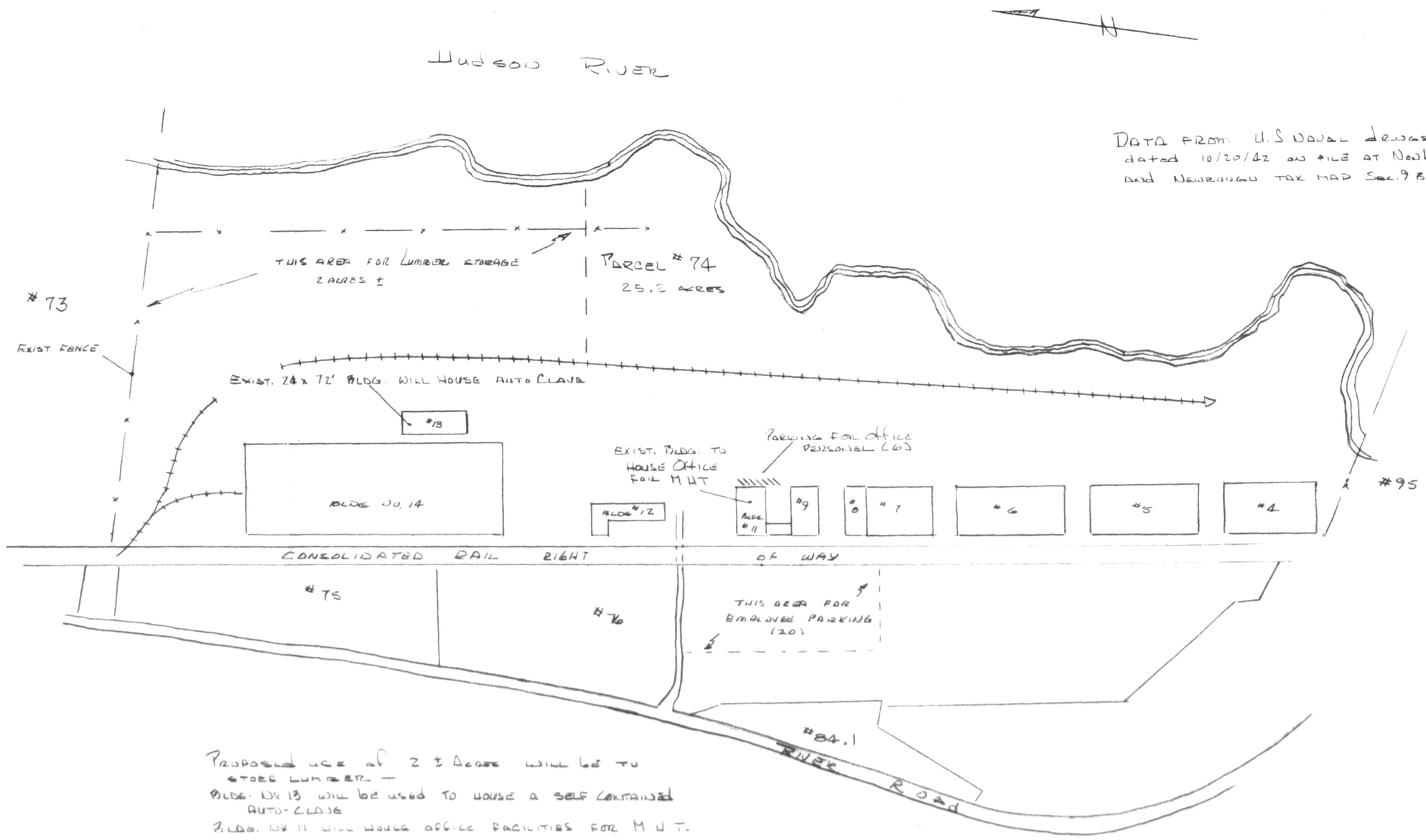
PLAN FOR:
DR. GOODSON & DR. ANTONY
TOWN OF NEW WINDSOR ORANGE COUNTY NEW YORK

Revision	Date	Description

Drawn AD
Checked
Scale 1" = 20'
Date 30 AUG. 83
Job No D985-83

SITE PLAN

Sheet 1 of 1



PROPOSED USE of 2 ± ACRES WILL BE TO STORE LUMBER —
BLDG. NO 13 WILL BE USED TO HOUSE A SELF CONTAINED AUTO-CLAVE
BLDG. NO 11 WILL HOUSE OFFICE FACILITIES FOR M.U.T.

PROPOSED USE of KROLL PROPERTY LOT # 74
M.U.T.
POUGHKEEPSIE, N.Y.
MAR. 24 84
1 SHEET